THE AMERICAN JOURNAL
OF
CLINICAL MEDICINE

Editorial Cabinet

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VOLUME XX, 1913

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"Needlessly Anxious"

This beautiful picture of a tender-hearted old doctor and his charges, by the celebrated German artist, Ernst Zimmermann, was reproduced especially for The American Journal of Clinical Medicine from the original painting in the Art Institute, Chicago. *See the editorial on page 2 for a more complete description of it*

The American Journal of
CLINICAL MEDICINE

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Our Twentieth Volume

A New Year's Word of Greeting

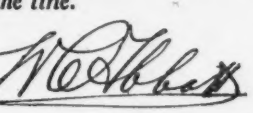
WHEN *in January, 1894, I began the publication of The Alkaloidal Clinic (the old name will ever be dear to me) I had little anticipation of the rapid growth in circulation and influence in store for that little thirty-two page publication.*

Why it pleased my medical colleagues I shall not try to explain, although I think it was because I put my whole heart into it—anyhow it pleased many and has continued to do so ever since. From a mere infant it has grown to be a giant—in size, in circulation, in literary and professional strength, and, best of all, in the affection of its readers, which I prize more than anything else.

Nor has Clinical Medicine stopped growing—nor will it stop! Every year we feel that it is getting better—and we are encouraged in this belief because our readers tell us so. We do not purpose ever to be satisfied with it. Never do we expect to be able to say: "There, it is perfect now." It is our settled policy to be constructively discontented ever and to seek from ourselves and from you new sources of interest, helpfulness and power for its pages.

What Clinical Medicine is we owe largely to you, its readers. We shall owe more to you, and we trust that you will feel there is a debt also on your side—a debt to be paid by helpful suggestions, by promptly paid subscriptions, and by "the good word" wisely spoken to your associates—by good generous "boost" all along the line.

With this thought, this aspiration for better work from all of us, again I wish you A Happy and Prosperous New Year!



The Drugs We Use

PROFESSOR John Uri Lloyd has made an investigation that demands the consideration of every student of therapeutics and every person interested in the trend of medical thought. He has undertaken to ascertain what are the drugs actually utilized by the practicing physician, and for this purpose he has employed the method of collective investigation. He does not tell us just how he selected his witnesses, but nobody familiar with our friend Lloyd would attribute to him the slightest shadow of trickery.

First he selected a number of non-eclectic physicians, graduates of accredited "regular" schools. From these he secured lists of the drugs they used most freely. The reports were tabulated in an ingenious graphic manner, aided by a simple but effective conch-shell diagram. A study of this table discloses some remarkable and unexpected facts. The drug named by most physicians was echinacea, which received the approval of 148. Next came aconite with 108 votes, then cimicifuga with 96, followed by bryonia, gelsemium, pulsatilla, veratrum, belladonna, and cactus in order as named. In all, 117 plant remedies were listed, while 70 others did not receive a solitary mention. Of these 70 no less than 18 are official, among them being buchu, cinchona, guaiac, jalap, physostigma, senega, stramonium, and ginger. Cinnamon, cubeb, gentian, rhubarb, senna, serpentaria, and taraxacum secured but one vote each.

Evidently this does not represent the preference of the average practician. Some of the old standbys, apparently discarded, are employed only in combinations, others only in the form of their active principles. Opium is not mentioned.

A similar canvass was taken of eclectic physicians. This showed the first five drugs favored to be the same as with the regulars, the order being gelsemium, aconite, bryonia, cimicifuga, and echinacea. Nux vomica and ipecac stood higher than with the regulars. The conclusion voiced by Lloyd is fairly warranted by the evidence: "The practicing physicians of America now freely employ any remedial agent that appeals to them as being useful, regardless either of its origin or the school affiliations of its introducers."

Then the crucial question came up, as to whether these lists could be taken as representative of the body of the profession. Lists were made of all the vegetable drugs utilized by the physician, regular, eclectic, or homeopathic. These were sent to 30,000 practitioners, care being taken to exclude specialists and to select some from every part of the United States. All were graduates of well-established medical colleges. More than 10,000 reports were received from them, and these were tabulated. The results give the best general view as yet afforded of the materia medica actually employed by the average doctor.

The list commences with a genuine surprise: The drug that received the greatest number of votes (6239) was *cactus!* Then followed hydrastis, aconite, gelsemium, and ipecac; then digitalis, ergot and belladonna; then nux and hyoscyamus. Echinacea received 5065 votes. Viburnum prunifolium stood twelfth, thuja fifteenth, opium sixteenth, and cinchona thirty-seventh; while bryonia was eighteenth; lobelia, twenty-first; pulsatilla, twenty-second; apocynum, twenty-third; hamamelis, twenty-seventh; and arnica, thirty-seventh.

Lloyd concludes his comments thus: "The majority of physicians are guided in their uses of remedies by their own judgment, based upon clinical observation and professional necessity. It is evident that physicians in actual practice generally prescribe as they see fit, regardless of whether a drug or a preparation is mentioned in the Pharmacopeia or has been recommended by their therapeutic instructors, or whether it be advocated or not by the leaders now in authoritative positions."

Nobody who has really formed the acquaintance of the American doctor will doubt the entire truth of this proposition. He hears what one has to say, is always ready to give trial to suggestions, but he draws his own conclusions and goes his own way. He is quick to recognize and to discount the element of self-interest and that personal predilection one always feels for the children of his own brain. But if he is any one thing more than all others he is independent.

Take up that element of self-interest: How do the drugs in this investigation stand that have had back of them a commercial push?

Cactus stands at the head of the list, yet it has had more opposition and less advertising than many others. Any advertising enjoyed by echinacea has long since perished, yet it stands eleventh. Viburnum is twelfth, cascara sixteenth, saw palmetto twenty-fourth,

hamamelis twenty-sixth, passiflora thirty-second, dioscorea forty-fifth, helonias fifty-seventh, triticum, an old official remedy, seventy-fourth; sarsaparilla, the most persistently advertised of all, is seventy-eighth; aletris sixty-second, avena eighty-fourth, pinus canadensis one hundred fourth, buchu one hundred thirty-fifth, while ginseng is not even mentioned.

It is impossible to see any advertising influence in these figures. Most of the promoting was done in the long distant past, and its influence has ceased. That which continues does not appear to exert any appreciable power, at least over the doctor, however it may affect the laity. These figures bear out our contention that advertising drugs to the medical profession only secures the articles a trial; and the final result must depend upon the real merit of the goods. The doctor is himself the best judge, far better than the druggist who presents the remedy. While the doctor is always willing to try out a new remedy, he judges it finally by his own experience and not by the advertising literature.

A long association with our comrades has taught us to accept their conclusions as phenomena worthy of study. Time and again the writer has put out suggestions that seemed very good to him, but after general trial they have been dropped. In other cases, ideas were submitted that he himself advocated with some doubt, but the great big profession took them up and pushed them far beyond his own expectations—and in all cases the majority proved to be right.

Therefore, when, disregarding the attacks of every variety, including the imputation of interested motives to its advocates and labored demonstrations of its "uselessness," we find more practitioners advocating cactus than any other remedy in the materia medica, we accept their verdict. We know that the great mass of the profession does not make mistakes by wholesale.

OUR FRONTISPIECE

The picture which we present to our readers this month, as a frontispiece, is the reproduction of a painting hanging in the Art Institute of Chicago. It was painted by the distinguished German artist, Ernst Zimmermann, who was born in Munich, April 24, 1852, being the son of Reinhard Sebastian Zimmermann, also well known as a painter.

Ernst Zimmermann received private instruction in art from his father, studied at the Munich Academy, and later at the principal art centers of Europe. He is best known as a genre painter, that is, in most of his canvases he depicts simple human incidents from the lives of every-day people.

In "Needlessly Anxious," the picture which we are showing our readers this month, an old doctor is seen feeling the pulse of a little child who is held in its mother's arms. The mother is looking up anxiously to the doctor, while he smiles back to reassure her. We can see that the child is quite ill, and doubtless the anxious young mother has good reason to feel disturbed, but evidently the good doctor believes the condition is not a serious one and he comforts her by his quiet, kindly manner, like the real doctor he is. The group is a very human one, and the painting is one which attracts many visitors at the Art Institute.

If any of the readers of CLINICAL MEDICINE desire extra copies of this picture in a form suitable for mailing we shall be happy to supply them at five cents each. Only a very limited number is available.

Nothing stays put. The world awakes every day with discarded habits and new ideas and altered outlooks The clock can't tick a round trip without measuring a revolution of some sort somewhere.—Herbert Kaufman.

Even in medicine this is going on every day. Old things are passing. We are but nibbling the edge of opportunity. Bite big and deep, and hang on.—W. C. Abbott.

STOP THOSE TAG-DAYS!

Tag-days are becoming a nuisance. One may have a reasonable objection to this Salvation-Army method of solicitation; he may not like the system of many subjecting their wills to one and he responsible only to himself; he may object to the sending of funds abroad to similar irresponsible control; to the systematized begging; to any other of the many aspects of this work. It is annoying to stop and explain to many fair Salvation lassies who have not the slightest idea of what the objections stand for and see in the refuser only a grouch.

But apart from all this, the "tag-day" custom of sending young girls to accost all sorts and conditions of strange men on the streets and ask them for money is so utterly objectionable that one wonders what the mothers and other matrons, society leaders, directresses of charities are thinking of to allow it. Moreover, it is whispered that members of the demimonde take advantage of the opportunity, impersonate the authorized

solicitors and make acquaintances for their own nefarious vocation's furtherance.

It, surely, seems high time to call a halt. The manners if not the morals of young girls are not likely to be enhanced by such performances. Take any hundred men met casually on the street, and estimate the probability that at least one of them is the sort that would take advantage of such addressing to "get fresh"; and even though the lady knows how to repel such insolence, it is not the kind of experience for her to be exposed to it.

Innocence is not always an effective defense against the wiles of the libertine. Familiarity with such encounters takes away the bloom. At the very least, if the girls must do this thing, for pity's sake let every one of them be chaperoned by a husky brother.

It's today that I am livin',
Not a month ago;
Havin', losin', takin', givin',
As time wills it so.
Yesterday a cloud of sorrow
Fell across the way;
It may rain again tomorrow,
It may rain—but say
Ain't it fine today?

VACCINATION AND THE UNREASONERS

The laws of sanitary science have been determined with accuracy, expressed in terms within the comprehension of everybody, and a knowledge of them placed at the disposal of every man, woman, and child in the land. No man gainsays them. Were they put to the actual test universally, there would be no need for a medical profession; yet men eat too much or too fast, drink too much or too little, work too hard, rest too little, and in every conceivable manner violate every last one of these laws; and the medical colleges still send forth an annual crop of graduates who quickly find places and plenty to do.

By a flawless course of reasoning, it has been demonstrated that alcohol is not a necessity to any person in health, and its utility in disease is strongly questioned. No harm would result were its internal administration to stop at once and absolutely; yet men get drunk, and a large proportion of our professional work lies in correcting the evils worked by alcohol.

Venereal diseases would cease completely were people to abstain from illicit sex relations; the most potent source of blindness would be cut off, and the human race be regenerated; but the abdominal surgeons still exercise their arts on the victims of gonorrhea, and the far-reaching effects of the spirochete form the basis of ponderous tomes.

Typhoid fever would cease to exist were every physician to disinfect effectively his patients' alimentary canals and the excreta during the course of this malady; yet it remains the febrile scourge of the world.

For all these and very many other species of unreasoners, we of the medical profession make allowances. Our work is based solely on the results of Unreason, consists in obviating the effects of violations of truths perfectly well known to the world at large, and usually to the law-breakers whose derelictions entail consequences in physical disorders. We should cease to exist as a body were Mankind to do what he knows he should do.

Something of this came to me as I examined the admirable circular of the Illinois State Board of Health upon the subject of smallpox. How graphically it portrays the results of this disease in the unprotected; how completely and irrefragably it proves the efficacy of vaccination; so that no man who is capable of reasoning can fail to be convinced. The document is complete and flawless—so far as it goes. It is one every physician ought to obtain and disseminate it among the laity as far as his influence extends.

The trouble is that this has been done before, time and again, and the antivaccinator still exists—and persists. The untruthfulness of his statements, the fallacies of his argumentation, the blind and mischievous nature of his senseless stand against one of the most essential and best-proved facts in the science of medicine have all been demonstrated repeatedly; and, yet, he remains where he stood at the beginning—unreasonable, unconvinceable, unregardful of the disfigurement and disease and death he scatters among the community.

For all the other unreasoners we provide—the drunkard, the glutton, the venereal, the many varieties of men and women who transgress the laws of hygiene and live unsanitarily, excepting only for the antivaccinator. We show these others why they should avoid the fruitful causes of disease and death, and, finding they pay no attention to our prophecies, we get busy to obviate the effects of their reason. The antivaccinator we leave to go his way.

We can not wash our hands of any of these unreasoners, the antivaccinator any more than the others above mentioned. The consequences of his unreasonable disbelief fall upon the community, and especially upon those for

whom the law gives him the guidance—his family. The innocent suffer from his wrongheadedness, and through them the whole community. Even though the disease be confined to the antivaccinators, business suffers when smallpox is reported as prevailing in the place.

If we insist, therefore, upon compulsory vaccination it is not because we dispute the right of every man to think for himself and believe as he pleases. It is rather because we know that the health of the community is of higher importance than the opinions of any one person. When the teaching of science and the collective common sense of the community are agreed that certain measures should be adopted for the welfare of others we may disagree with the mandate of society as much as we please, but it is our duty to submit.

If we violate the laws of the land we may expect punishment. Are not the laws of life itself—of health and its maintenance—of the prevention of disease—as worthy of rigid enforcement?

Not in clanging fights and desperate marches only is heroism to be looked for, but on every railway bridge and fireproof building that is going up today. On freight trains, on the decks of vessels, in cattle yards, on lumber rafts, among the firemen and the policemen, the demand for courage is incessant, and the supply never fails.—William James.

MEDICINE AND THE LAY PRESS

The question of supervising the medical information given out by the lay press has been under agitation for the past few years. *The Medical Times*, with that journalistic genius for which its proprietor and publisher is distinguished, has recently brought the matter to a focus by soliciting expressions of opinion from the editors of some of the leading daily newspapers, with special reference to the desirability of employing medical experts to edit this sort of news. These expressions *The Medical Times* publishes in its November issue, and they make interesting and suggestive reading. The most striking and significant thing about them is the practical unanimity with which they all say, in effect, "Yes, such an editor would be of great value, but is hard to find." In other words, while virtually every one of these newspaper men agree with the *principle* of a medical editor for the daily press, not one of them seems to be particularly enthusiastic over the idea of putting such a plan into *practice*.

What is the reason for this? It is universally agreed (or it is said to be agreed) that the time has come for taking the public into partnership in the truths of medical science. At all events, the public itself feels that it has, and is making its sentiment known in no uncertain fashion. And the profession purports to acknowledge the justice of the public's attitude. It is, further, pretty generally recognized that with the present sporadic, unsatisfactory, even grotesque, character of the medical information now appearing in the newspapers and magazines, the public stands no chance of receiving through the public press any proper enlightenment upon matters pertaining to medical science. Even the lay press itself concedes so much.

Why is it, then, that the matter never seems to get any further? Why are all the offers and suggestions of cooperation made by the medical profession coldly received and responded to with *ifs* and *buts* amounting to a "decline with thanks" on the part of the lay press, which is supposed to be alert to the public demands and eager to comply with them? Must we suppose that the lay press really prefers to publish erroneous and distorted information upon medical topics, or at least is wilfully careless about the character of the news it prints? Hardly, when we consider to what pains and expense that press will go to secure accurate and first-hand information upon all other subjects. Can it be that the lay press has any particular malicious pleasure in misrepresenting medical science and the medical profession? Scarcely, for the press has always been the doctor's best friend, and whatever good understanding exists between the public and the physician, and by the public of his work, is due for the most part to the offices of the lay press. Besides, as I have said, the lay press admits the demoralized condition of its medical news service, and desires its reform, just as earnestly as the profession does, or the public.

What, then, is the hitch? What prevents the profession and the press from getting together and working out this problem, which looks as though it ought to be perfectly simple? I suspect it is the fact that the medical man's idea of what constitutes medical "editing," and the newspaper man's, are two entirely different things; and the newspaper man knows this. The medical profession, while admitting that the public should be made copartners in its truths, insists upon exercising a *didactic* censorship of medical news; the lay press, on the other

hand, is well aware that public education does not come about by any such forced campaign, but by a natural, unconscious process of selection of the facts, in which the public is its own best assorter and interpreter, and that what is needed is an *editorial* censorship, i. e., a discrimination of what is interesting, and a reasonable care for its accuracy.

It is often pointed out that the daily newspapers have their expert financial and sporting editors; but it should be remembered that these department editors do not attempt any didactic "education" of their readers in financial and sporting matters; they simply select and present to the public such news in their departments as their editorial judgment finds interesting, and leave the public to learn its own lessons and form its own habits of thought and action.

A medical editor on the public press, if his influence is to be equally broad, would have to be a man in whom the journalistic instinct predominates, following out the same editorial and not paternalistic discrimination—and it is this kind of a medical editor that the big newspaper men declare is so hard to find. Even in medical journalism, with the profession for its reading public, this editorial spirit is wofully lacking. The medical journal, especially the journal of organized medicine, too often assumes the dictatorial, paternalistic attitude, complacently deciding in what subjects its readers shall or shall not be enlightened, instead of frankly and freely laying before them all the salient truths and happenings of medicine, as they transpire, and leaving them to make their own evaluations. And the journal that does fulfil its broad journalistic function is too often regarded with suspicion by the traditional element in the profession.

For my part, I cannot see the necessity, or even the desirability, of the expert medical editor of the lay press being a medical man at all. Recurring to the parallel of the sporting and financial editors, it will be remembered that these men are not sportsmen or financiers. They are journalists trained to cover those fields, which I think is much better. But the important thing is that they are given full and free access to the sporting and financial worlds and their exponents. They have their place in the baseball field and the board of trade. Sporting men and financiers allow themselves to be frankly interviewed. Here, I think, is the crux of the whole situation. The barriers should be swept away and the physician be given all the avenues of approach to the public, and they to him, which are open between the public and every other man. Aside from the personal element, which of course enters into every class of work, the doings of medicine—not only the occasional great achievements, but the day-to-day incidents of medical progress—should be as freely reported, with names and dates and interesting detail, as the current happenings in every other line.

If medicine will let down its traditional bars, which belong to the times when medicine was a medieval priestcraft, and throw open the doors of communication between the profession and the lay press, as in all other departments of life, dismissing its foolish idea that the people are incapable of grasping and evaluating the truths and happenings of medical science, the entire problem will be solved. The press will take ample care of the rest—the providing of expert editors, and the like. And medicine will not thereby be embarrassed, but effectively stimulated and wholesomely corrected.

Indeed, I ardently believe that the noblest and most important function of journalism is fearlessly to condemn what is bad in the attempt to reform it and freely to praise what is good in the effort to encourage it.—Hearst.

This is a sentiment with which we heartily concur. To fight wrong always—and fight it bravely; to help along every good cause—and do it with all our hearts. These are the ideals which we try to keep constantly in mind.

"TAKE AS DIRECTED"

The American Druggist for October records two deaths from errors in dispensing. In one, "lemon salts" was called for, citric acid being the article desired, and oxalic acid, sometimes called salts of lemon, was dispensed. As the package was properly labeled and marked "poison," no blame attaches to the drug clerk.

In the other case the physician ordered two ounces of laxol and the clerk delivered two ounces of lysol instead. This error was furthermore made possible by the very unscientific and unsatisfactory method in which the directions were written, for the doctor ordered that the patient should take the medicine "as directed."

While there seems to be no excuse to be offered for the substitution of the poisonous lysol for the harmless laxol (unless, indeed, the writing was faulty), such a substitution would probably never have occurred had the physician *written* the directions instead of giving them verbally. This practice of giving verbal directions and labeling the prescription

"as directed" is a most objectionable one from every point of view. When verbal directions are given, misunderstandings may easily arise and the patient or the nurse may even forget the directions between the time they are received from the physician and the time the remedy is received from the pharmacist. We believe that in every case physicians should write out in full on their prescriptions the directions for use. In this particular instance such a practice would undoubtedly have saved a life.

We have before now called attention to the importance of giving the patient explicit written instructions in regard to the taking of medicine. *The American Druggist* is quite right in demanding that the directions on the prescription should be detailed, and we desire to go one step further and assert that in case the physician dispenses his own medicine, he should likewise write down the manner in which each separate item should be taken. Only in this way can he safeguard the welfare of his patient and also his own interest.

Discussing the same occurrence, *The Midland Druggist and Pharmaceutical Review* touches upon the psychology of the thing, introducing its remarks by showing that the pharmacist who dispenses the wrong medicine, the use of which produces fatal results, suffers untold mental anguish. The editorial goes on to say that, innocent of any intent of wrong-doing, he is subjected to the same legal proceedings as the basest criminal in the land, and since this is the law, he must submit. He must suffer the same unsavory notoriety, the same fierce denouncement for his act, whether it be due to carelessness or to one of those unaccountable and involuntary psychic conditions in which the mind directs the hands to do one thing and occupies itself thereafter with some extraneous subject.

Whatever may be the technical explanation of this condition of mind, one thing is certain: it is not peculiar to pharmacists. It may happen to any person occupied with work which grows monotonous and which may be done mechanically. To the pharmacist, tired out with long hours of the same kind of work, the filling of prescriptions becomes wearisome; to the stenographer the voice of the dictator grows monotonous; to the motorman the conductor's oft-repeated bell fails to make any mental impression; yet the pharmacist goes on filling prescriptions, the stenographer continues writing, and the motorman runs his car unconsciously. Then suddenly the mind is jerked back, as it were, to a realization of surroundings, and the pharmacist is in agony lest he has dispensed the wrong medicine; the stenographer is in a panic, having no recollection of the dictation; the motorman nervously wonders how he managed to bring his car safely through the crowded streets.

The pity of it is that, in case of accident, while the motorman is rarely arraigned as a criminal for his absentmindedness, the pharmacist must always submit to the full process of the law, even if he is later acquitted. There is no more evidence of intent of wrongdoing in the one case than in the other. Nevertheless, the law is necessary. Those who have the people's lives in their charge should feel the burden of responsibility that rests upon them. No such work can safely be done heedlessly or thoughtlessly. The doctor at the bedside has this fact hammered into his heart every day.

I would compromise war. I would compromise glory. I would compromise everything at that point where hate comes it, where love ceases to be love, and life begins its descent into the valley of the shadow of death. But I would not compromise Truth. I would not compromise the right.—Henry Watterson.

THE MATERIAL BASIS OF EMOTION

The long conflict between the spiritist and the materialist seems to have ended in an armed truce, or rather in a resort to that court of final resort, the public, who are now constituted judge and jury. Moreover, the court, being disinterested, requires the parties to submit their evidence, and in each particular case it renders judgment in accordance therewith, without permitting individual cases to become the basis for fundamental law. It is wonderful how the angry passions of the combatants subside when they are called upon for a "show down."

"Show me," says the judge, "I'm from Missouri," and the contender finds that argument is easier than proof. Inference, analogy, ingeniously constructed hypothesis, aerial theorizing, all these are easy and entertaining, but they are not convincing.

It must be said, however, that the materialist has made progress here and there, and in many instances has established at least the probabilities of his contentions where the opinions of his antagonist were formerly accepted unchallenged. The investigations of criminologists have shown that the criminal classes contain many defectives; that their imperfect development has rendered them poorly fit to cope with their honest neighbors

in the battle of life; and that if they have fallen into evil ways it is another exemplification of the great law of cause and effect. Indeed, we may base the reasoning in any case upon the rule that back of every phenomenon there is an adequate reason—a cause for every effect.

The study of natural phenomena has removed many facts formerly deemed supernatural from that category, and placed them under that of effects to be expected from comprehended causes. Thunder is no longer referred to the rolling wheels of Jove's chariot, nor the lightning looked upon as bolts hurled by his angry hand. Earthquakes, volcanic eruptions, hurricanes, and pestilences are not now considered evidences of divine wrath, and when some science-belated theolog so designates them he is an object of mirth rather than of argument. Some years ago, when Wisconsin was visited by a destructive storm, a few ministers preached upon it as evidencing the wrath of God, while other divines pronounced it the work of the devil—a difference of opinion among experts that occasioned caustic comment among intelligent but not therefore irreligious persons.

In matters personal, we are learning to associate certain mental and even moral conditions with material causes. The ferocious temper of the man afflicted with a gouty toe had more significance than our grandfathers suspected. The ophthalmologist traces many mental peculiarities of notable persons, even those which have rendered them illustrious, to eyestrain. We accept the pessimism of Carlyle, making due allowance for the veil of autotoxemia through which he looked upon the world. Behind the military genius and the tireless energy of Napoleon we discern the spark of epilepsy, itself due to retention of toxic waste. The blotchy features and the chronic grouch of Samuel Johnson we refer to a sluggish liver. Voltaire first correctly referred melancholy to constipation, which a compatriot of his later traced to fecal decomposition and the formation of mercaptan. Most attentive wives learn to recognize the husband's need of "a pill" when the children or other domestic troubles begin to annoy him.

The writer has frequently referred to the singular fact that cicutine hydrobromide removes the fear of impending insanity. Why should this be? We can only surmise that the specific cause of this morbid emotion is something for which cicutine is a remedy. Since this alkaloid specifically sedates the spinal cord and the sexual function, we may look to irritation somewhere in this tract for the cause of the apprehension. As to the cause of this irritation and the modus operandi of cicutine in relieving it, we must wait a few centuries for the laboratories to catch up with clinical observation.

But is it true that cicutine really has the action just described? Clinical observation has been unmercifully ridiculed and undeservedly. Simple observations are fallacious. Single observers are apt to be hobby ridden. Only by the multiplication of observed cases can we establish a therapeutic canon. Hence, the writer sends this appeal to the many thousands of readers of this journal: Will those of you who may have the opportunity give a trial to cicutine hydrobromide and report your results?

Not all of you—and because there are three types among us. One of these goes to a clinical trial with the unalterable determination to find it a failure; one with such faith in its success that he suppresses or perverts the facts; the third, without favor or prejudice, honestly seeks to find the truth, whatever it may prove to be. It is the latter class from which we ask for testimony.

Is the thing true? How true? How often true? Under what circumstances true? When and why not true?

Edification and wisdom come from the work of the many, combined into a whole.

A retentative memory is a good thing, but the ability to forget is the true token of greatness.—Elbert Hubbard.

EMOTIONS AND HEART THROBS

In connection with the curious tendency of the heart and muscles to betray themselves, some time ago we had our attention called to an article in the *Revue Scientifique* describing an apparatus which was the invention of Professor Mosso, and which consisted of a table on which a man could recline at full length, having an equipoise so delicate that the slightest disturbance of the center of gravity would cause a large indicating needle below to move to one side or the other.

This apparatus was designed to show how the heart and circulation are instantly affected by the mind, and some strange things it brought to light. The slightest emotion would cause the needle to incline toward the head, and it would dart in that direction even when the man on the table was asleep and a noise was made in the room, though not sufficiently loud to awaken him.

Mosso relates the interesting experience of an Italian professor who, reclining at full length upon the test-table, read to himself from two books; the first one of poems written in his own language, and the second, Homer in the original. The needle was passive while he read the Italian verses; but when he came to the harder task of translating Homer it pointed toward his head and remained fixed immovably at that point.

Taken all in all, we are inclined to think that the little force-pump in our chest is about the only truthful organ, and that when novelists speak of a false heart they slander it. As a matter of fact, its delicate throbs are attumed to every hidden thought, and perhaps some day, a genius will devise a form of Mosso's instrument which may be attached to a witness in court and enable justice to dispense with the formality of an oath. Muensterberg and other practical psychologists have shown already the judicial possibilities of instrumental tests of a similar character.

Remember that to change thy mind and follow him that sets thee right is to be none the less the free agent that thou wast before.—Marcus Aurelius.

AN AMERICAN SCHOOL OF SURGEONS

At the last meeting of the Clinical Congress of Surgeons of North America, Dr. Franklin H. Martin, its secretary, recommended the foundation of an American College of Surgeons, similar in purpose to the Royal College of Surgeons in England. This college, he urged, should have the power of granting a degree in surgery supplementary to the degree of doctor of medicine.

This recommendation was approved and a committee of ten eminent surgeons was appointed to formulate a plan for the creation of such a college in cooperation with institutions already established and now conferring the doctor's degree.

It is believed that a special technical school, such as that outlined in brief by Dr. Martin, will decidedly raise the educational status of the budding surgeon of America, who, at the present time too often passes from the door of the medical college to the operating amphitheatre, long before he has had an opportunity to familiarize himself with the scientific principles and technical problems which are of such far-reaching importance in surgical practice. A man qualified by the additional study and experience required to secure the degree of "F. A. C. S." would be far more likely to make a success in this chosen branch and far more likely to reflect honor upon American medicine than would otherwise be the case.

The suggestion is an excellent one and we hope it will be developed. American surgery already occupies an enviable position in the world of medicine, but there is no reason why it should not attain even higher planes.

It matters little where I was born,
Or if my parents were rich or poor;
Whether they shrank from the cold world's scorn,
Or walked in the pride of wealth secure;
But whether I live an honest man,
And hold my integrity firm in my clutch,
I tell you my brother, as plain as I can,
It matters much.

READ THE ADVERTISEMENTS

Not long ago we sent out a test letter to a large number of subscribers and among other things we asked, "Do you read the advertisements in CLINICAL MEDICINE?" More than 90 percent of those replying said they did, and 88.8 percent stated that their purchases were guided to a considerable extent by what they saw in these pages.

This is as it should be, and this editorial is not for them—the majority—but rather for the other 10 percent who confess they do not read the advertising section.

The first thought of a man who has devised something good is to tell about it. If he knows it is good he is proud of that fact. The thing is the child of his brain. He wants to see it distributed—brought to the attention of possible purchasers, and at a profit to himself, of course.

Unknown, the thing is useless to anybody—dead! Hence, if he is a man of large vision and desirous of seeing his product known beyond his immediate acquaintance, he begins to advertise.

From this time the thing advertised is identified with his name. His honor is bound up in it. If it fails to make good that fact is a reflection upon him and his house. The continued sale of that product depends upon its merit and the maintenance of its quality. The very fact that it is advertised and continues to be advertised is *insurance* to the customer that the product is one that can be depended upon.

Once in a while there comes along a man of unclean reputation or poor judgment who is deluded into the belief that he can "put something over" if he puts money enough

into it. He deceives himself. For a while the thing will go, but if it is inherently inferior to other things already on the market, with which the people are familiar, its end is in sight.

The day is past in which unscrupulous men will risk large sums of money in the chance of "trimming" gullible people. The principles of advertising are pretty well instilled into both seller and buyer, who realize that profit comes from the repeat sales, and there will be no repeat sales unless the product is a worthy one that can stand the test and live up to the claims made for it.

Some unwise people, doctors among them I am sorry to say, buy goods—often imitations of advertised goods—whose chief claim for consideration is their cheapness. How foolish. Money is not saved in this way—it is lost. Even if one batch of goods *happens* to be good there is no assurance that the next one will be. One shoddy pair of trousers which wear out in a month; one pair of shoes that rip the first time they are worn; one furnace that refuses to draw—these will more than rob *you* of all the saving to be made on a dozen reliable, honor-made-and-advertised, money-back trousers, shoes and furnaces. And one poor lot of drugs that fail you in a crisis will let more money out of your pocket in a night than you can save in a year.

Buy the goods that have a guarantee behind them. You will find them freely advertised, always. Buy goods with names on—names with which you are familiar; and make it your business to get familiar with these goods, as well as with the claims made for them, by reading the advertisements. Do this every month. Make it a habit. Do it with the purpose of learning something, just as you read the text of the magazine itself.

Get the literature of the thing advertised and read that. You will be perfectly astounded at the amount of knowledge you can add to your store in this way.

If I wanted to understand automobiles, the first thing I should do would be to go over the display advertisements of what seemed to me to be the best machines; then I would send for the makers' catalogs, read them carefully so as to get a grasp of the details, finally comparing the claims made by the different manufacturers, then buy!

If I wanted to learn something about serums, or about rare chemicals, or about new remedies of any kind, I would study the advertisements and literature of the firms making them. Naturally they know more about their products than other people, and it is distinctly to their advantage to point out to their prospective customers, in detail, how they act, why they act, and how to get the best results with them.

The whole history of our wonderful scientific and industrial age is written in the advertising sections of our journals. Think over the great inventions—railroads, telephones, electric lights, trolley cars, the phonograph, automobiles, the synthetic dyes, wireless telegraphy, flying machines, in fact anything that has changed the life of man; just as soon as it had reached the practical point where it could reach out and vitalize the earth it first came into touch with people and commerce through the advertising page.

It was advertising which created the demand for these things, and so made these marvels universal.

Living men *must* read the advertisements. Don't be a cave-dweller.

I am not just sure what the unpardonable sin is, but I believe it is a disposition to evade the payment of small bills.—Elbert Hubbard.

WORK OF THE BUSY QUACK

Every month there seems to be some new development evidencing the ingenuity of the quack. For some time it has been the fake prescription. This epistolary effort starts in a chatty, familiar manner, telling how easy it is to cure some common ailment—one that is sure to pass away of its own accord if not interfered with. All one has to do is to take a gill of syrup, a pint of whisky, a half dram of oil of wintergreen, and—not to forget!—a 50-cent package of cockalorum (which, as you may have guessed, may be had of any druggist or direct from the manufacturer), boil the things together, and, with the courage born of faith, take a tablespoonful whenever that tired feeling gets troublesome or that thirsty sensation pesters. There must be "guys who fall for" this transparent device, or there would not be so many examples of it in the papers.

Before me is a long newspaper cutting, looking quite like regular reading matter, with the usual heavy heading, "Doctors' Mistakes Costly to Patients." It slips into the ordinary testimonial from the grateful patient, and by no means omits the address of the mountebank whose vast experience in diagnosis enables him to save women who had been given up by doctors sundry and several.

"Doctors' mistakes," indeed! Do they ever make such mistakes as to hand over the lives of their dear ones to the mercies of any rascal who can concoct a plausible ad and get a venal paper to print it? Will the people never learn that these men are simply gentry who want to sell something for many times its cost; that the bigger promises they make, the more they sell, and the buyer has no possible redress when he finds himself swindled? How often must they be told of the alcohol and drug habits formed by listening to the sly suggestions of ads specially devised to induce people to buy medicines they do not need? Millions of dollars are yearly lavished on nostrums worse than useless, while the men upon whom people *must* depend where death threatens are left to starve in neglect.

Of all the many words I have written in my messages to my brethren, there is none of deeper moment than that wherein I urged that the community should be educated to realize that it is worth its while to sustain its doctor and enable him to develop to the highest his powers and means for doing good work. The doctor needs an automobile to take him quickly to the suffering; he needs the latest and best means of affording relief and the knowledge of how to use it. No community can afford to keep its doctor too poor to go to postgraduate schools, to secure the best equipment, the latest improvements.

Plant the germ of that thought wherever you can. The seed will not all fall on stony ground, but some will germinate and bring forth fruit.

RACE SUICIDE—THE GOVERNMENT TAKES A HAND

In November, the Post Office Department began a wholesale fight upon various drug firms, physicians, midwives, and others accused of using the mails for criminal purposes. More than two hundred men and women were arrested on the charge of being engaged in the sale or administration of medicines and devices intended to prevent pregnancy or cause abortion. These individuals were located in sixty-nine cities and towns in twenty-nine different states. Thirteen reside in Chicago. Among those arrested were several individuals connected with wholesale and retail drug houses and a number of physicians of fairly good standing and supposed to be engaged in reputable practice. It will be seen that the Government has determined upon exercising the most rigid measures to throttle the growing tendency toward race suicide.

This whole problem was presented some years ago through the columns of CLINICAL MEDICINE. The position of our editorial staff, all of whom are opposed to the traffic in "preventives" as well as to criminal abortion, is already known and we hardly need to reiterate it here, but we feel that we should say again that it is the duty of every physician and every man to yield absolute obedience to the laws of our country. While there may be conditions under the stress of which it may be necessary to destroy the life of the unborn child to save the life of the mother, these conditions are rarely, if ever, so pressing that the physician may not consider them in association with other physicians and be guided in his decisions by the opinions of the majority.

The tendency of human reproduction is downward and the times demand no artificial stimulation of the already shrinking birth-rate. In France they are beginning to realize the national danger in race sterility; in Germany and England the birth-rates are already falling; and in America we know that our old colonial families—our best blood—are dying out from natural causes which need no encouragement.

While the government measures are most drastic, those who will suffer from them, in the main, are persons who deserve little sympathy, because for the most part they are men and women who seek to make money by taking life. On the whole, the government campaign is a good one, and if it is guided by wisdom and common sense in its execution it doubtless will do much good.

The world isn't half so bad as it's painted. There'd be far less suffering and pessimism on earth if we'd set out to find the best in folks half as hard as we search for the worst.—Herbert Kaufmann.

THE ANTISEPTIC DRUGS IN TYPHOID FEVER

In a most excellent paper on the treatment of typhoid fever, Dr. W. F. Milroy (*Western Medical Review* for October, 1912), says that antiseptic therapy has no direct effect upon that disease. Nevertheless it has a value sufficient to warrant its use. Some have ridiculed the idea of the administration of intestinal antiseptics, for the reason that the intestine is not rendered sterile by this means. It has never been claimed that such a result is secured, but it is absolutely

certain that the degree of infection can be materially diminished.

Upon the kidneys rests chiefly the duty of eliminating the products of typhoid infection, and the thoroughness with which this is done will largely determine the degree of damage that will be inflicted upon the organism during the course of the disease. Now, one of the principal sources of the toxemia of normal urine is absorption from the intestines. Experimentally, Bouchard and others have greatly diminished the toxicity of normal urine by the administration of intestinal antiseptics.

Since, then, the safety of the typhoid patient depends so largely upon the successful activity of the kidneys and since, further, the burden thrown upon those organs is materially lightened by the use of intestinal antiseptics, these agents clearly ought to be used.

Furthermore, the depraved character of the digestive fluids, the inflamed and ulcerated condition of lymphatic structures along the intestinal tract, the weakened or even paretic state of the musculature of the intestinal walls, and most of all the general toxemia of the patient in typhoid fever, all of these promote fermentative and putrefactive processes in the contents of the intestine. From this condition results gaseous distention, tending to hemorrhage and perforation, diarrhea, interference with the nutrition of the patient, a higher temperature, nervous symptoms, and general distress of the patient.

Intestinal antiseptics indubitably are of great value in guarding against these difficulties. This is a point upon which we have insisted so often that we need to say no more.

Doctor Milroy does not insist upon any particular antiseptic, to the exclusion of all others, having obtained good results with betanaphthol, the sulphocarbolates, saliphen, acetozone, and others, including among them the carbolic-acid and iodine mixture of Roberts Bartholow.

We have frequently observed a very decided improvement in apparently severe cases of typhoid fever after the sulphocarbolates had been administered to effect, and therefore have come to look upon them as our mainstay, not only in typhoid fever, but in all bacterial intestinal conditions. Of course, we do not mean to say that the sulphocarbolates are the only drugs that should be employed here. Undoubtedly others have given equally good results, but we prefer to depend upon one remedy the efficiency of which we have proved, rather than to change indiscriminately from one to the other.

There is no short-cut, no patent tramroad to wisdom. After all the centuries of invention, the soul's path lies through the thorny wilderness which must still be trodden in solitude, with bleeding feet, with sobs for help, as it was trodden by them of old time.—George Eliot.

TREATMENT OF SORE FEET

Captain George H. Richardson, of the medical corps of the National Guard of California, in *The Military Surgeon* for November last relates his experience in the treatment of blisters and abrasions on the feet contracted by soldiers during encampment or maneuvers. The lesions coming under his care varied in character from a slight erythematous roughening of the skin to neglected hyperemic ulcers of several days' duration, and, while many of the blisters had already ruptured, several, varying in size and location, were found filled with the familiar serous exudate.

To begin with, the abraded surface was given a preliminary scrubbing with warm water and soap; but later, in order to see results under conditions simulating those of actual service, simply the official 7-percent tincture of iodine was applied thoroughly, with a camelshair brush or cotton swab over the affected areas, and allowed to dry. If the blisters had not yet ruptured, they were first painted and then incised with a sharp-pointed, sterilized bistoury, care being taken to enter the blister under and beyond its raised surface. After expressing the serum, the incision was given a second coating.

In cases of simple abrasions of the superficial layers of the skin, no dressings, ointments or powders were applied after the iodine treatment, so that the stockings worn came in direct contact with the sores, and the men were told to report the following day. Those who reported invariably were cured. However, when the blisters had broken or ulcers had formed, some sort of protective dressing was found necessary, and for this purpose nothing seemed to surpass zinc-oxide adhesive plaster, properly cut and fitted to the part.

Dr. Richardson says that more than fifty percent of those requesting medical attention among enlisted men and officers complained of trouble with their feet. Anything which will help here will be a godsend.

Leading Articles

The Development of Active-Principle Therapeutics

By J. M. FRENCH, M. D., Milford, Massachusetts

EDITORIAL NOTE.—At the request of Dr. T. D. Crothers, Dean of the College of Physicians and Surgeons of Boston, Dr. French has consented to deliver a course of lectures upon "Active-Principle Therapeutics" to the students of that school. The first of these lectures will be presented early in January—about the time this number of CLINICAL MEDICINE *will reach you. We are glad of the opportunity to present it to you herewith. Other of these lectures will follow in succeeding issues.*

WHEN I was a student in Dartmouth Medical School, one of the professors told us a little story one afternoon, to while away an otherwise dull hour, which made so deep an impression on my mind that I have never forgotten it.

It was the story of a young man who had been suffering for a long time from some obscure disease and was steadily growing worse, while the attending physician gave little hope of his recovery. Finally, as a last resort, and at the request of the patient's father, a consultation was held, six of the ablest physicians in the vicinity being summoned to examine the sick man and consider what could be done for him. The doctors met, and each one made a thorough study of the patient and his symptoms, after which they retired to a private room for consultation. Meanwhile the anxious father, determined to know the opinion of the consultants at first hand, and not as it might be doctored up and given out in the interests of the attending physician, had secreted himself in a closet in the room where the doctors were to meet and listened intently to the discussion which took place.

One by one, beginning with the eldest and coming down to the youngest, as is duly provided by the code of ethics, these wise and scientific men delivered themselves each of his own opinion as to the diagnosis and pathology of this baffling case, and each offered the best explanation he could present of the obscure and unusual symptoms from which the patient was suffering.

The Thing of Most Interest—The Cure

Finally, all the older men having spoken, it came the turn of the youngest and last of the six. "Gentlemen," he began, "we have spent all our time thus far in considering the nature of the disease from which this man is suffering. The thing which interests me most is, *what will cure him.*"

In the closet the listening father in his heart applauded and quickly registered the vow, "*This is the doctor that shall treat my son.*"

So it is that men seek a physician to be cured of their diseases or be relieved of their pains; and he is a poor doctor, from their standpoint at least, who can not grant them the one boon or the other. To the physician the diagnosis is important and the pathology is essential; but to the poor victim and his friends the cure is everything. To the men and women who employ us, who pay our bills and give us a living, we are simply doctors, and not scientific men; curers, and not preventers of disease. From their point of view, the doctor who, when called to attend a sick man, tells him at the outset that his disease is self-limited and must run its course, that it can not be aborted, cut short or modified in any way by medical treatment, is not worthy of the name of physician and has no excuse for pretending to treat the sick.

And, frankly, when you come to think about it, how would you like that kind of a doctor to treat you when you are sick? When that time comes, you will be likely to feel that the real business of a doctor is to cure you; and if he does not know how, then his business is to *find out how*. You will be apt to realize then that the diagnosis and pathology of disease are merely preliminaries to the all-important business of treating, and, if possible, curing the sick person.

My good friend Dean Crothers suggested to me some months ago that he would like to have me give a few talks on some practical subject to the students of this college. When in response I proposed to talk to you about *active-principle medication*—than which I know of no more practical subject in medicine—he expressed a fear lest I might find it difficult to interest you in such a subject.

I confess that I was somewhat surprised at this reply; for I am unable to understand how it could be that you, who have undertaken to fit yourselves to practice medicine, could fail to take a lively interest in the most important part of the curriculum, the treatment of disease. Surely, this can not be the case—it is unthinkable. There are only two explanations of which I can think, and the first is that Dr. Crothers himself is not convinced of the practicability and superiority of the methods which I shall advocate; but from my long acquaintance with him I do not believe that such is the case. There remains only the alternative that the Doctor fears I may not be able to put the matter in such a way as to make it clear, and plain, and attractive to you. Well, *that is up to me—and to you*, to decide.

Active-Principle Medication Not a "New System"

Active-principle medication (which is also known as dosimetry, alkalometry, alkaloidal medication, active-principle therapeutics, and by various other names) is not, and does not claim to be a new system of medicine, but only a new method of employing drugs; and I believe, and shall endeavor to convince you, that it is at once the most potent, the safest, the most convenient, and in every way the most satisfactory—both to patient and physician—of all known ways of using drugs for the cure of the sick.

Active-principle medication stands for therapeutic optimism, as opposed to the prevalent therapeutic nihilism of the day. (It is in no sense a school or a sect, and must not be so understood.) The active-principle physician is a man who believes he *can do things*. He believes that remedial agents, when properly administered, positively *do* exert a favorable influence upon the course and termination of disease-processes. And not only does he hold this as an abstract truth, but he confidently affirms, as to a large class of cases, that he has found the drugs that will do the work, and has learned how and when to administer them so as to obtain the desired result; while, as to the remainder, he is searching diligently for the means required, and confidently looks, day by day, for their discovery.

There has been great progress in all departments of medicine during the last quarter of a century, and not the least in the department of therapeutics. The change has included the forms of the medicines used, the methods in which they are administered, and the indications for which they are employed.

When I began to visit patients with my preceptor, he used to carry a big black trunk filled with nauseous pills and powders and liquid abominations. Today I can carry more kinds of drugs (and do vastly better work for my patients) in a pocket-case of 2-dram vials filled with clean, neat-looking tablets or granules.

My preceptor gave saltpeter and "spirits of niter" to lower the temperature in typhoid fever, with powdered opium to lock up the secretions and relieve the pain, and brandy or whisky to start up the flagging pulse. I, today, go about it in a very different way.

He did not care to begin the treatment until the symptoms were well marked and the diagnosis evident. I want to see my patient at the earliest possible moment, before I or anybody else can tell what is the nature of the fever from which he is suffering.

His endeavor was to conduct the sick man safely through the various phases of the dreaded disease, and save his life by heroic measures, at the last, if necessary. My aim is to save him serious illness, if possible—and, if I can do it without permitting the development of symptoms enough to warrant a definite diagnosis, I am so much the better pleased; and so is the patient.

A Mighty Progress: The Active-Principle Materia Medica

Now, I do not mean to intimate that all the progress in therapeutics has been in the direction of the active principles, for that would be absurd. We have the synthetics, and the animal extracts, and the serums and antitoxins, and physical therapy, and many

things equally important; and no one treats diseases as they were treated forty years ago. But it is my desire to interest you in the use of the active principles after the manner of Burggraeve, and Abbott, and their followers.

It was one of your own honored pharmacists, Mr. F. A. Davidson, the president of the Theodore Metcalf Company, who on one occasion said in the local medical society of which I am a member that the alkaloidal granule represented the highest development of the art of the pharmacist. And it was another of the most prominent pharmacists of the country, Mr. J. K. Lilly, of Indianapolis, president of the firm of Eli Lilly & Co., who in a recent article in *The Pharmaceutical Era* upon the development of American pharmacy, after describing some of the improvements which have already been made and still remain to be made in pharmacy and therapeutics, adds:

"We further predict that even more radical changes will occur in the next quarter century; that the progress of the one just closing will be as child's play compared to that which will be experienced between 1912 and 1937. Crude drugs will gradually disappear, to be replaced by active principles, synthetic products, and biologicals. The practice of injecting intramuscularly and intravenously will increase. Punishing the stomach with large, frequent, and nauseous doses is bound to give way where possible to more refined and direct methods. Medicine will become less and less empirical, and more and more rigid demands will be made upon the manufacturer. We are profoundly convinced that these demands will be fully met."

The Development of the New System

Let me now sketch for you in brief outline the development of this new system, which can be traced in three successive steps, the first of which made the system possible, the second making it an accomplished fact, while the third, and last, made it an indispensable necessity to every progressive physician.

The initial step consisted in the discovery of the alkaloids and other active principles of medicinal plants, thereby providing the necessary material.

The first of the alkaloids to be brought to the knowledge of the medical profession was morphine, which was isolated and described by the apothecary Sertuerner, in the year 1816. Within the next sixteen years, strychnine, brucine, quinine, cinchonine, narcotine, codeine, veratrine, coniine (or cicutine), atropine, nicotine, aconitine, and hyoscyamine were discovered by different chemists, so that by the end of the first third of the nineteenth century no less than thirteen alkaloids were known and prescribed by physicians. Since then numerous additions have been made to the list of active principles, which includes, not only the alkaloids proper, but many resins and glucosides, besides some miscellaneous principles, and concentrations sufficiently potent to allow them to be classed either as active principles or with them.

Many of the latter class of remedies were up to a recent date manufactured by B. Keith & Co., of New York, and by Lloyd Brothers, of Cincinnati. They were for a time enthusiastically advocated and largely employed by the eclectics; but most of these socalled resinoids were later discarded by them, as a school, in favor of what are called the "specific medicines," that were first introduced by Dr. Scudder, and afterward manufactured by the Lloyds and by Merrell. At present, along with these active vegetable derivatives —not, indeed, similar to them in derivation, but similar in use—are included a considerable number of the more potent chemical synthetic and inorganic substances, which are largely used by the active-principle therapists.

The Principle of Dosimetry: Minute, Frequent Dosage

The second step in the development of active-principle therapeutics consisted in the establishment of certain general principles governing the use of the active principles as to methods, indications, and dosage, for the purpose of accomplishing certain definite therapeutic results. This revolutionary step was brought about by the master-mind of Burggraeve, of Belgium, who conceived and elaborated the method which he named dosimetry.

Dr. Burggraeve had seen the defects of the old systems of therapeutics, in which the natural drugs were the sole medicinal resources of the doctor. These were administered mostly in their crude form or in the shape of voluminous mixtures, and were inconvenient to carry, unpleasant to take, very uncertain as to action, and decidedly unsatisfactory in their results. From such a combination eventually, and inevitably, there came into being, on the one hand bald therapeutic nihilism and, on the other, blind faith in the various forms of suggestion.

Adolph Burggraeve was born in Ghent, Belgium, in the year 1806. He died in 1902, after nearly a century of life spent in his chosen profession, the later years of his

active life having been devoted to the development of the system of therapeutics which is his masterpiece. He became professor of anatomy, and later of clinical surgery, in the University of Ghent; also he was a member of the Royal Academy of Brussels. It was at the latter institution that he conceived and elaborated the system of dosimetric medication—an enduring foundation upon which his fame will ever rest.

The Principles of Dosimetry According to Burggraeve

As stated by Burggraeve, *dosimetric medicine rests essentially upon its power to jugulate those fevers in which all acute maladies have their commencement. Its great end is to prevent anatomic-pathologic lesions, for these once established are above the resources of art.*

The study of morbid causes he declares to be indispensable, since without it medicine is little more than empirical. The dosimetric medicaments are simple, never composite or amalgamated. The "dominant" treatment, as it is known in dosimetric practice, consists in attacking the morbid cause. The variant treatment is applied to those symptoms through which the diseased organism makes known its sufferings.

To acute maladies, dosimetry opposes a sharp and active treatment, while chronic maladies are combated by more deliberate methods of treatment. That is to say, in acute maladies the treatment must proceed as rapidly as the disease, in order to prevent organic disturbances; but in chronic maladies the treatment should proceed slowly, in proportion to the lengthened duration of the disease.

The medicaments most commonly administered are the single, proximate principles, such as the alkaloids, which are given in divided doses, usually in the form of soluble granules.

These are, in substance, the words of Burggraeve himself and may be taken to represent accurately the spirit of dosimetric medicine as understood by its founder. It is worthy of note that he gives the place of first importance to the object to be accomplished, and the second only to the medicaments to be prescribed.

Although Burggraeve was able to show remarkable results in the treatment of disease by his new method, yet he did not succeed in securing its adoption to any considerable extent, until after he had interested Chantaud, a noted pharmacist of Paris, in his undertaking, and formed an alliance with him, according to which the latter thereafter devoted his great skill to the manufacture of the highest grade of alkaloidal granules that had ever been produced, and in this way became the practical coworker with Burggraeve in building up his new therapy. From this time on the dosimetric treatment of Burggraeve spread rapidly, and especially did it begin to flourish in Belgium, France, Spain, Portugal, Italy, Holland, and Denmark.

The next step in the evolution of modern active-principle medication consisted in certain modifications of the original system of dosimetry, and the broadening of its scope and methods, attendant upon its introduction into America.

One of the first men in this country to become interested in the new system was Dr. W. T. Thackeray, who purchased an outfit for the manufacture of alkaloidal granules from Dr. Chartier, of Paris, and endeavored to persuade Messrs. Parke, Davis & Co., in whose employ he was, to engage in the business of manufacturing them. The firm, however, declined to undertake it, considering the commercial difficulties in their introduction too great. Thereupon Dr. Thackeray himself formed a company for the manufacture of the granules, and started and issued a few numbers of a journal, which he called *The Alkaloidal Clinic*, devoted to the advocacy of dosimetric medication. However, he did not succeed in making a success of either branch of the undertaking, and the enterprise soon ended in failure.

Abbott and Waugh Enter the Lists

Not long after this, Dr. Wallace C. Abbott, then a young doctor from Vermont, who had been graduated from the Medical Department of the University of Michigan and located in the suburb of Ravenswood, of Chicago, and who happened to have for some time been interested in the teachings of Burggraeve, began in a small way the manufacture of alkaloidal granules, in order to supply himself and also the friends whom he had interested in this subject; and, in 1894, he began the issue of a new *Alkaloidal Clinic*.

Dr. Abbott was a man of unbounded energy and determination, and his enthusiasm proved contagious and caused the alkaloidal idea to spread rapidly. I myself am one of those whom he interested early; and in my library I have preserved not only the first issue of *The Alkaloidal Clinic*, but nearly every number that has followed. From that time onward, his has been the central figure in the propaganda for active-principle therapy in

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Dr. Alexis Carrel

The Franco-American physician, who is the winner of the $39,000 Nobel Prize in Medicine. Dr. Carrel is distinguished for original research, carried on mainly at the Rockefeller Institute, as a result of which it has been shown to be possible to preserve tissues and organs artificially for future transplantation into the body

America, and his aphorism, "The smallest possible quantity of the best obtainable means for securing a desired therapeutic result," has been the slogan for rallying its forces to the battle.

Soon Dr. Abbott associated with himself Dr. William F. Waugh, an accomplished scholar, a successful physician and medical teacher, and a versatile and forceful writer, and who has since then shared in the work of editing *The Alkaloidal Clinic*—the name of which later was changed to *The American Journal of Clinical Medicine*—as the scope of the work was broadened. These two active and brilliant men were for a time also associated in the manufacture of all the medicaments employed in alkaloidal therapy, so called; a designation, however, which in the course of years grew much broader than the term would indicate, until it has finally come to include many more things. These may best be stated in the lagnuage of Dr. Abbott himself, who very properly may be called the father of American active-principle medication, as Burggraeve was the originator of the earlier form of dosimetry. These are the leading principles governing the newer, more positive, more definite way of combating disease:

The Principles Governing Active-Principle Therapeutics

1. The administration of small doses of the most active and potent known remedies at short intervals, until either remedial effect or signs of drug-sufficiency, i. e., the full physiological effect, are secured.

2. The administration of such doses in the form of soluble granules or tablets each of which contains a definite amount of the drug.

3. The additional use of such solvents, eliminants, vital incitants, and local and systemic antiseptics as have proven of remedial value.

4. The use of any and all remedial agents in the most concentrated form available that will produce definite results in recognized conditions.

5. The avoidance of promiscuous combinations, problematical remedies, crude drugs, and nauseous, changeable alcoholic tinctures and fluid extracts when the active (remedial) principle of the drug can be obtained in its purity and given in effective, well-established doses.

Many other honored names have been associated with those of Abbott and Waugh in the building of active-principle therapy in America—a structure which is still in the process of making. Among them are those of John M. Shaller, the author of the best manual of alkaloidal medication for beginners; E. M. Epstein, who may be termed the scholar of the method; Coleman, the persistent advocate of systemic antisepsis in the prevention and treatment of the contagious fevers; Alfred S. Burdick, the present managing editor of CLINICAL MEDICINE; and George F. Butler, who gave the inspiring address to the preceding class of graduates from this school. Many more names might be mentioned, in fact one hardly knows where to stop.

As to the present status of active-principle medication, it can be said that many thousand physicians are using the methods and medicaments referred to in their daily practice to a greater or less degree, and their number is each year increasing. Enthusiasm and optimism are the characteristics of these men as a class. They claim that they are better physicians because of the teachings of Burggraeve and his successors; that the principles and methods of dosimetry have enabled them to meet disease with greater confidence, and overcome its manifestations with greater certainty, than they were able to do with the old galenic methods.

One of my own most intimate friends, the man through whom I got my first introduction to this newer and better method, assures me that under the uncertainties of the old system of medication he had lost all enthusiasm and nearly all interest in the practice of medicine, and was seriously contemplating changing his occupation, when, thanks to Dr. Abbott and THE ALKALOIDAL CLINIC, he was ushered into a new world in his profession, given a new confidence in his ability to help the suffering, and filled with a new enthusiasm in the practice of medicine. And I can confidently affirm, from my own knowledge of this physician, that this optimism has never left him, but that he is today a broad-minded, well-balanced, optimistic, and successful practitioner, a man who believes in himself and in his power to relieve suffering and to prevent and cure disease—and these are the things which every physician needs to believe and do.

A Model Medical Refuge

By ROBERT GRAY, M. D., Pichucalco, Chiapas, Mexico

EDITORIAL NOTE.—We have received many requests from readers of CLINICAL MEDICINE *for a picture of Dr. Gray. We have finally prevailed upon the Doctor to send us such pictures, and finally he has yielded to this request. The illustrations of this article will be appreciated by the many thousand physicians who have read his many contributions to this and other journals.*

HEALTH and length of days being the unreached Paradise of man's despair, both of which have been mine in inordinate degree, I unbend my stern personality to unmask some of the little side scenes that hedge about the great subtle mysteries of natural life, to which disease and physical pain are strangers.

I regret that the realistic lessons I have demonstrated to the unfortunate people of this unhappy land must greet my American brothers through the weakening mediums of the camera and the pen, rather than through the visible tangibility that towers around me tonight.

Forty-eight Years of Mexican Practice

I have been living in this fairy land of flowers and fevers for now more than forty-eight years without having had one day of vacation or experiencing a single hour of illness or pain, while all these years rarely passing a day when not exposed to contagion. As many as a hundred sleepless nights in a year have been my experience, and six weeks without going to bed, snatches of sleep, vouchsafed only in rocking-chairs, have been repeated more than once; wet to the skin often more than a week at a time; not seldom riding twenty leagues [60 miles] during the day and night, over a broken, roadless country, with paths winding along the narrow verge of sheer precipices, swollen mountain torrents intervening, through black clouds of mosquitoes, in drenching rain. This is the story of rural tropical practice, in a nutshell; and few are the combinations of flesh and blood long exempt from martyrdom to such ordeal of professional labor of love.

Dr. Robert Gray and his friend, Dr. Fernando N. Maldenado, with their mozos

Dr. Gray and native employe, Alfredo, in dispensing harness. All one end and most of side of store invisible

The noble native brother, Dr. Fernando N. Maldenado, graduate of the University of Pennsylvania, who is photographed with me just as we roam these torrid wilds on those sure-footed mules, is one of the faithful, self-abnegating medical heroes who respond to the distant call of the lonely plantation or sequestered ranch, often being absent from his interesting family as long as two months at a time; thus meriting admiration I cannot claim, as I have no family nor other endearing tie, being all alone on earth. We never meet save where Hope has fled, as we have just passed a week in what seemed must be the chamber of death, yet we parted today gratified that we left the patient saved. And just as we passed that brightened portal we were photographed, a few minutes later, in the road on the margin of the rubber-land belonging to the doctor, whom I thus introduce to you all as one of our progressive "family," worthy of your appreciative admiration.

Food and Hygiene in the Tropics

My long and arduous experience has taught me that health depends upon water, food, and house influence.

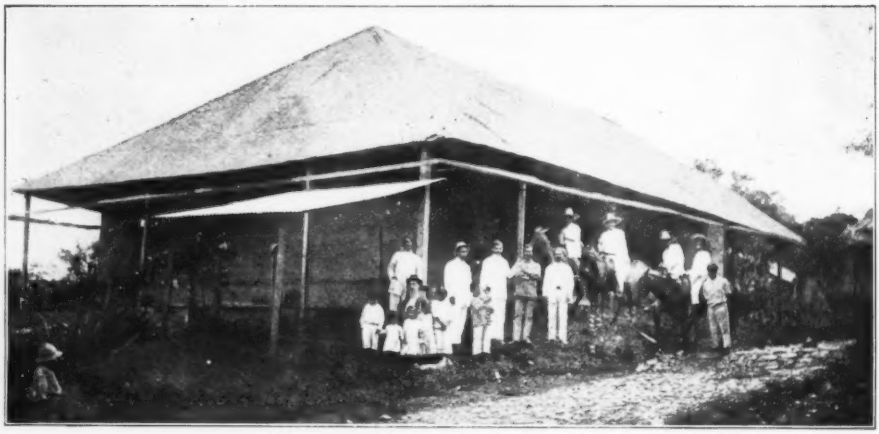
No water in malarial belts, excepting artesian and rain-supplied, is safe for drinking purposes, unless boiled each day or disinfected before drinking; the best disinfectant being a 1 : 2000 copper-arsenite solution. Half a liter of water, contaning this is practically prophylactic against cholera.

Food, in hot malarial belts, should be largely fruit and vegetables, with milk-products—butter, cheese, and clabber milk—eggs, fowl, sheep, game meats, fresh beef; but nothing from the hog, not even lard.

The house and office should be insulated against the heat and be ventilated from above, through wire screening, the latter to prevent the entrance of house-flies and mosquitoes. The doors and windows should be screened, the doors closing by springs and the windows hung on hinges, so that they may be closed when the temperature falls. Ventilation through open spaces just under the ceiling is more desirable than any other in tropical climates.

My house is really a model for tropical residence, being constructed of finest native cedar lumber, and insulated against the sun's rays with "plaster board" overhead—a recent American novelty, that excludes alike heat, cold, and moisture, while neutralizing the terrible penetrating radiation from the sheet-iron roof. The floors are concrete. There is a foot-high screened ventilating space all round the top of the house, just under the ceiling, and also an open space a yard high between the partitions of rooms and the ceiling. Thus, I can sit here through the torrid suffocation of these afternoons practically as comfortable as if it were among the soothing freshness of a June morning in a blue-grass resort of Kentucky.

And as for my garden supplies—they might well be the envy of the kings of the earth, as a picture of my papaya grove would amply attest, where now are hanging hundreds of fruit, many weighing fifteen pounds or more,



The exterior of Dr. Gray's home, with the Doctor and a group of native friends and helpers

and the delicious delicacy of flavor which no watermelon nor canteloup can approach, while lending a digestive property that puts to shame anything that passes over the druggist's counter.

All the year round I have pineapples to rot on the stalk, and cabbage, potatoes, and all the luxuries of your northern market-garden at its best; and, in addition, your dried fruits and apple-butter. When at home, I pass half my time at work in the garden, as a legitimate appetiser, as well as a feature of healthful exercise—not as a work of necessity, as my native boy servant, Alfredo, has learned my gardening art.

I have also inaugurated a system of concrete reservoirs, to store the rain-water from the sheet-iron roofs, for drinking purposes; and these are destined to be of much good service.

For the Sake of Lowly Humanity

What I have done here is what every doctor should do in the hot and sickly belts of the United States, and also teach his people to do the same; for I tell you frankly there is no need of turning up your toes in the long and dreamless sleep while you yet are young men. I think I might have died a thousand times had I shown the white feather in the face of menacing danger. My crowning pride—an honorable one, I believe—is to appear in robust health and to vanquish the angel of death whose sable wing hovers over a desperate patient. Other motive in life I have none, nor have had any time since the battle of Gettysburg.

I have reared the house, built other structures, and made the garden and other improvements as object-lessons to people who were strangers to such conveniences.

I had the money—which some fine day I was destined to leave, with no heir to enjoy it—and resolved to adorn with substantial structures this torrid hamlet, where I have lived and labored so many years, rather than leave the cash subject to the rapacity of the government or its custodian bank or some merchant.

And now, frankly, I am in a quandary about the disposition of the property before I go to the mournful hill. Sometimes I muse over the thought of giving some worthy woman my name, which would make her heir under Mexican law; but there are so many undesirable possibilities inseparable from such contingency that I dismiss the idea with repugnance, as inimical to my anchoritish fame. Then, again, I am inclined to will it to the municipality as a permanent residence for physicians, rent-free; which is more in harmony with my elastic spirit, ever repining over the woes and sufferances of the medical fraternity, which have never been mine.

CLINICAL MEDICINE, and its readers in incredible numbers, has for many years been repeating requests for a contribution such as this, as well as for photographs. But this never before has been possible, for the reason that there was no photographer nearer than sixty miles; and to have him come here to do this work was an expensive luxury. So, now, if the photographs and pen-sketch I now submit do not please the editors and readers, the disappointment will be mutual; for I am not vain about the one or the other, yet have no feasible remedy in my power.

I have haunted the pages of CLINICAL MEDICINE quite enough in past years, and still more recently, with my renegade clinical experience to desist from inflicting that well-thrashed topic in this connection; and I am not likely to be seen thus very often hereafter, though it is possible I may be heard from occasionally.

Hospital Work in Asiatic Turkey

Sketches from the International Hospital

By CYRIL H. HAAS, M. D., Adana, Turkey
Superintendent of the International Hospital

EDITORIAL NOTE.—In the year 1909, the seacoast town of Adana, in Asiatic Turkey, was the scene of a general massacre of native Christians, mainly Armenians, by the terrible Turk. Out of the stress of that time of bloodshed and suffering came the hospital about whose work Dr. Haas tells us something in this article. This story will thrill you—touch your manhood.

THIS poor blind Moslem beggar stood for years on the Adana bridge, begging daily for the paras that kept him alive. During the massacres, being unable to take an active part in the slaughter, he appealed to his friends to help him do his share. A hunted, helpless Armenian was dragged to the spot and held before him, the while with a rusty saw and cruel hand he crudely severed the captive's head from the body. Thus this believer in Islam gained treasure in heaven!

Not in the same way, mayhap, yet with the same spirit, this horrible act was repeated thousands of times in the city of Adana and on the Celician Plain during the month of April of 1908.

Over against such dimness of soul and heartless inhumanity the International Hospital of Adana would take its stand. To do good to those who would do evil; to save life rather than destroy it; to prevent suffering when possible; to relieve it wherever found—under Cross, under Crescent, under whatever banner—these are some of the reaches of its endeavor. This hospital was always a need in Adana.

The Blind Moslem Begger of Adana

Dreamed of, from the time of missionary occupation of the city; an object of devoted labor during the twelve years' residence of the Rev. W. N. Chambers, D. D., it was suddenly forced into existence by the fearful ravages attending the massacres just named. During these dark days of unspeakable human butchery, four emergency hospitals were hastily opened, and in them Red Cross nurses and volunteer workers tirelessly spent themselves in relieving pain and suffering.

How the International Hospital Came to Be

When at last the days of deep stress were over and the immediate needs were met, the workers retired from the city and the hospitals closed—with one exception, and that one made possible by the combined efforts of

Dr. Chambers, Major Dowty-Wylie (English vice consul), and Edward I. Nathan (American vice consul), who were members of the International Relief Committees.

It was the conviction of these men that the succeeding needs of this city of tragedy could be met best by a permanent hospital that would be open to the sick of all races, closed to no creeds, and to be in the highest sense a massacre memorial. Thus the International Hospital had its birth. For three years now its doors have welcomed the sick, reaching, with the added days, extended fields of usefulness. In keeping with the plan of permanency of the Hospital, a call was issued for a foreign physician, and the writer was given the privilege of responding to this call, arriving in Adana in May, 1911.

To a newcomer in a strange land with many languages, knowing none, all was a problem. Adana, devastated in one year by massacre, fire and disease, seemed steeped in despair; the needs of the suffering appeared overwhelming. Those to whom life had been left had all ambition blasted; fear, poverty, disease frowned on them everywhere. Eye diseases were so prevalent as to make the sight of healthy eyes almost an exception; while malaria, with its dreaded complications, was continuing, albeit in more subtle ways, a widespread massacre of its helpless victims.

The building, though not primarily erected for hospital purposes, had been very well adapted to it under the supervision of Dr. Chambers. Wards had been spaced, and private and nurses' rooms provided. During the year the process of hospital organization has been continued and facilities provided for operative work, a sphere in which a properly equipped hospital may render large service.

The existence of cholera in the city seemed to demand, at times, the exclusion of all other patients. Fortunately the epidemic never spread to such a degree, cholera patients always being cared for in a special room on the ground floor. However, the uncertainty involved interfered greatly with the clinics and routine work.

Nine different nationalities were represented in the wards during the hospital year of eight months, but the great majority of these were Armenians, a people who, indeed, live the lives of the hunted. Is there anything more blasting in its effect upon life than the element of fear, which now seems to be the most dominant thing in their living? At one time it is the fear of another massacre, based on rumors that persisted throughout the year—the work of cruel enemies. A shot is heard, and these persecuted Christian people stampede like cattle. At another time it is the fear of dread cholera, and in view of the sanitary condition of the city this fear was not without cause. And so it goes. With much despair in their hearts, little brightness and only few joys, we have come to know them this year. "Why live, when life is so sad? Why toil, only for defeat!" What memories, but of horrible butchery of loved ones? What hopes, but of poverty and loneliness?

The Musselmen Are Gaining Confidence

Of the Moslems received in the hospital, there were more than double the number of those of last year. Of the forty-six, more than half were cared for during the last two months, indicating an increasing confidence on the part of the Turkish population. It often was impressive to see a Moslem walk into the operating theater and submit to anesthesia and a serious operation, at the hands of strange doctors and nurses, without the least indication of distrust or fear. The Hospital is located in the Greek section of the city, and it is most encouraging to note the gradual increase of confidence, on the part of these conservative people, in our purpose to serve all sick who may come to us, regardless of creed or nationality.

The Kurds, alone and far from home, seemed to appreciate most keenly the treatment of their sick. Not infrequently it was found necessary (to the amused interest of all in the ward) for the doctor to speak to a sick Kurd in a very roundabout way: in English to Miss Davies; Miss Davies in Turkish to a Moslem; the latter, in turn, in Kurdish, to the patient. A wonderful method of obtaining exact information, indeed.

There is also a very large increase of Arabic-speaking peoples in Adana, and we find Miss Davies' splendid command of this language most useful in helping these folk.

Of the 309 in-patients, 250 were men, and 59, women and children. There were 88 who came for surgical and 221 for medical treatment. Seventy-five operations were performed on 52 men and 21 women, most of the operations occurring within the last three months. There were no deaths from operations, the mortality among the medical patients being due, usually, to cholera and malignant malaria. There were treated in the polyclinics 5825 patients, receiving in all 10,352 treatments. It is significant that

during March, April, and May more than twice the number of new patients were seen as in the previous five months, indicating an increasing reputation and influence of the Hospital.

It is in this service that one is ushered into the dark side of life. After listening several hours daily to stories of wrecked homes, murdered husbands and sons, shattered nerves from fright; of poverty and pain, suffering and sin beyond description, it is then that one longs for measureless resources of power to help and heal.

The Hospital is fortunate in having a staff in keeping with its name, the same embracing no less than six nationalities. In addition to an American physician, these aids are included: Miss Davies, Welsh, head nurse and superintendent of the Hospital; Miss Margaret Johnston, Irish, nurse, who arrived in February; Miss Lydia Talbott, English, nurse, now in England but returning in the autumn for permanent work. Of the native staff, there are Dr. Salibian, an Armenian, and four nurses in training. Added to these, we have in the way of helpers, one cook, one man servant, and two young women. During the coming year the staff will be increased by the addition of a resident pharmacist, one orderly, and a gatekeeper.

It is with the keenest pleasure that one recalls the enthusiasm and earnestness shown by these workers during the past year. With most of the work depressing, much of it loathsome, in addition to the long hours and small pay, the spirit in which they have toiled can be explained only by a constraining love, more than human.

Through the Wards With the Doctor

Entering, at the appointed morning hour, the men's ward, large and roomy, one notes the seventeen beds occupied by brown-faced fellows, looking so typically oriental, with their white head caps and red shoulder capes, set off by the white bed-coverlets embellished with deep-turkey-red borders.

Giragos is seen first—the pet of the ward, the little old man of eight years, aged and wasted. His back is bent and his leg is putrid with tuberculosis. "Why don't you laugh?" From out of the blank and wrinkled face comes the pathetic reason, "Because the laughs don't come." How could they come in a hut-home barren and dark, with no one to care but a nearly blind grandmother! How can they come from a body crooked and racked with pain, a pain without let! Finding many to love him in the hospital, a new world dawns and later the laughs do come, but not health. Two operations already, and not better. Amputation the only hope. To save the little sufferer from such a disgrace, that of losing a limb, his blind granny takes him back to his little hovel of despair and to slow death.

Manassa came to the Hospital exceedingly ill and no time was spent in making the usual financial arrangements. After weeks of careful nursing, he goes out today, fully recovered,

Mahmed, who is incurably blind

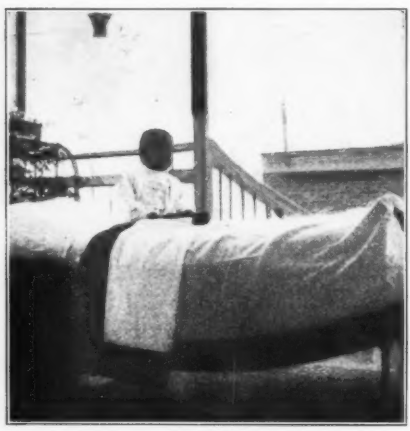
but without paying and without thanking. Yes, there are a few such!

Hagop's stab wound in the thigh is doing nicely. He got it in a drunken quarrel and is having plenty of time now for thinking all about it; and also of higher things, we hope.

Mahmed, this Moslem, was led to the Hospital by a Turkish woman who found him by the roadside. Both of his eyes are masses of suppuration. Big, strong, robust man that he is, how can I tell him that he shall not see again, as he begs for a word of hope? We must send him out to join that ever growing army of the sightless on this plain whom we meet everywhere and for whom no serious attempt is made that they might be saved from darkness, in body and in soul.

Manook, in the adjoining bed, is convalescing from an operation for hernia. He is given the permission to get up this morning, and forthwith rises on his knees in bed and before all the men, aloud, offers to God a prayer of thanksgiving. It is this same Manook's wife who wanted to be our night nurse "during life and death" if we would only find work for her husband, feed her boy at the Hospital and send her daughter to a boarding school.

Artin is next, quiet and discouraged, in the third stage of pulmonary tuberculosis, and an outcast. No disease is feared more than consumption in this land, and to be in its grip is to be despised and rejected, even by father and mother. As we look down upon this hopeless situation, we dream of that tuberculosis pavilion which some good friend, some day, will make possible in this country



Little Sarkis cured of stone in the bladder

of matchless sunshine, and so give to these forsaken sick a new lease on life such as is now coming to those of America and Europe similarly afflicted.

Abdulla, the little Moslem, awaits us with a smile and twinkle in his eyes. Found at the gate some days before, nearly dead with cholera, he is told that he may go now. He asks for the names of nurse and doctor on a card. "What for?" "To wear about my neck and place on the wall of my home in my distant country." The request is laughed off until persistence wins. Going, he seeks to kiss our feet, and from his young lips come most beautiful words of thanks.

In the next bed is Khruder, the large, splendid Kurd, a perfect specimen of manhood, eagerly awaiting his operation. Run over by a cart a month before, a large, sluggish ulcer slow to heal was produced on the leg, and he is most anxious to have the doctor plant new skin on it.

The rest are doing well with their sundry injuries, operations, dysenteries, and malarias; some not so well.

We pass into the corridor to get to the women's ward, when we meet a Greek bearing a gift of sweets and one-day's wage, his first after leaving the Hospital.

In the Women's Ward

In the women's ward we see little Varta with tuberculous limbs, having been brought to the Hospital by a loveless stepmother, who refuses to receive her back. The little waif begs that we may never send her back to the cruel home. In the adjoining bed is an Armenian woman recovering from an operation for an abdominal tumor. She is so thankful that she plans to go out and beg for the poor, thus showing her gratefulness to God. This woman's face shows greater hardship. Her husband and two sons were cut in pieces before her eyes, and she now lives with her two little girls in a small hut, with one mattress as furniture. Working in a cotton factory from daylight to night-light, she must now suffer from the effects of hard labor.

Rebecca, in the opposite bed, has eyes like festering sores. A quack woman, some weeks before, was treating her for trachoma, using filthy instruments. Result, a purulent ophthalmia gone on so long that hope has gone with it. Yet daily we must hear the one cry of her heart, "Is there hope?"

Little black-eyed, brown-faced Sarkis, here, greets us with a hearty laugh this morning. Suffering exquisitely for months with a stone in the bladder, he is now ready, stone in hand, to go home with his mother.

The operations now are begun. Khruder lies like a soldier, refusing anesthesia, while large slices of skin are cut from his upper leg and grafted on the ulcer.

Suddenly the English consul is announced, who wishes to see the doctor immediately. The latter not being able to leave the room, the consul is hastily ushered in, and blurts out the startling question, "Have you heard of another massacre begun? Two Christians killed in a vineyard and people getting panicky." But a baseless rumor it was. . .

In the Free Clinic

The operations of the morning being over, the time before noon is spent in seeing patients waiting in the clinic, below.

The first to confront the doctor is a young man who would be pleased if his mother-in-law could lie upstairs, since he is tired of her presence at home. Rather an ingenious idea on his part; but seeing that she is not very ill we think otherwise.

This widowed mother, next, is weary carrying her little son to the clinic. A trunk-lid fell on his back months ago, resulting in a deformed back and chronic abscess. "Oh, would that God would take him so that I could get time to earn my living. Otherwise where will my bread come from?"

The next, a young man who speaks some English, tells us that "his inferior parts are unwell, his stomach rolls up like a ball, and he is troubled with orphanism"—a serious combination, in very deed! This astute Turk pleads that we might examine him well, since he has nobody to care for him.

"Have you no wife?"

"Yes, two of them, but one is away and the other not well, so give me good medicine."

Knowing a very little of Turkish cuisine by now, one would be free to forecast a good recovery if the wives stayed, where they are, a little longer.

The next man, anxious to crowd in, has had his ear chewed off by a donkey. He is carrying it in his hand, and wants to know if we can put it back again, "the same as Jesus did."

The next four, village men, with the wonderful combination of colors, rags, and beauty (how we love them), are just ready to leave us this morning. A week ago they staggered into the Hospital yard from a fifteen-days' foot journey. Feet sore, swollen, ulcerated; pulses throbbing with high fever—no money—no friends—no home. Oh, the light that lightened their faces when they found the clean beds and friendly nurses!

Four village men

The Hospital Calls for Aid

Although some of the most real and obvious factors in our environment are donkeys, mosquitoes, fleas, flies, dust, filth, and mud-made huts, yet we would exchange with none. We covet nothing of another except the strength that would give us ever wider service and carry us far into the added years. Yes, one thing more we covet—your power to help *now*. Could you see the suffering of these forsaken human beings as we see them, hear their pathetic tales as we must, feel with them in their gropings for love and relief, life, indeed, would seem cheap and in vain that did not spend itself for such as these.

The International Relief Committee, which rendered such magnificent service after the massacres and which gave inception to this hospital enterprise, has bequeathed to others the continuance of its work. No hospital, even in the most prosperous and progressive country, is entirely self-supporting, much less could one be on this Cilician Plain, but so recently and completely laid waste. It is true that we welcome every opportunity to further the Hospital's support by means of pay-patients and outside practice; yet, it is not the policy of the Hospital to strive for entire self-support, for in doing this it would be compelled to cater to the well-to-do classes, those who can get help otherwhere; while the great mass of sick poor would be left untouched, those who can get help nowhere.

Thirty-six beds occupy the wards, not one of which, as yet, is being fully maintained by funds from without, yet the majority of which must needs be filled with homeless, friendless sick. Especially is it true of a hospital in Adana (the heart of the Cilician Plain), whose population of 60,000 is doubled, during certain periods of the year, by wandering, homeless men seeking work in the fertile fields about us, but many of whom are stricken with the subtle diseases of these low lands.

"Love your enemies." Where in the width of this wide world could be found a spot more fitting to incarnate this supreme teaching of our religion of love than on this blood-stained plain, where men of one religion—thousands of them, innocent, helpless—were shot down, cut in pieces, mangled, torn, trampled to death by the frenzied hate of men of another religion.

"Love your enemies." When could it be more appropriate than now, after such unbridled hate has spent itself in human destruction, and when from amidst the wreckage and ruin on all sides the cry of distress and the calls of the suffering seem endless!

"Love your enemies." How better could it be done than in an institution whose one impelling force is the love that would minister to the diseased and the defiled, the lame and the blind, the lonely and forlorn, those in pain or in the pangs of death?

"Love your enemies." We will to do it—in living action—every day; but—and let this strike to the heart—the power to make it possible lies with YOU.

The maintenance of the hospital beds is only one of the immediate tasks confronting us in off-duty hours. Others of like importance are the salaries of Miss Davies and the American physician, not yet assured; the support of our native nurses in training; the pharmacy; and the special assistant, who would investigate the poor, attend the clinics, and keep the Hospital linked with the homes. All of this we shall be pleased to tell any of you in detail if you will write us about it.

To us there is no more sublime work—the divinest form of human help for human. It is intensely interesting and difficult. We shall push on in it, confident that it can not languish.

Some of you who read this are very near to me. You have said that I should be back soon. No, not soon—never, to stay. For I have to help a multitude of help-seeking sufferers, and I cannot leave them until I must or until all tears are wiped away and there is no more pain. No, I shall stay here and work for these people.

Medication for the Senile

By I. L. NASCHER, M. D., New York City
Instructor in Geriatrics, Medical Department of Fordham University

EDITORIAL NOTE.—The treatment of the diseases of old age is receiving more intelligent study, thanks quite largly to the efforts of Dr. Nascher, whose paper we are pleased to present to our readers. The subject is one deserving careful consideration.

IGNORANCE of the anatomical and physiological changes that go on in the process of ageing, and ignorance of the action of drugs and other therapeutic agents upon senile degenerate tissue are responsible for our general lack of success when dealing with aged patients. The popular diagnosis, "old age," betrays our ignorance and indifference. The customary attitude of "let the old man have what he wants" and giving a placebo in lieu of treatment, or perhaps a simple tonic, is a further evidence of ignorance and indifference on the part of physicians. You all have heard this before; nevertheless, I intend to repeat it in my papers and lectures until the medical profession will believe with me that the old man is worth saving and they will make efforts to save him, until geriatrics at last is recognized as a worthy branch of medicine.

In my paper on "Minor Senile Ailments," printed in last October's number of CLINICAL MEDICINE, I gave some suggestions on diagnosis and treatment, while in a recent paper on "Errors in the Treatment of Senile Cases"[1] I pointed out a number of errors frequently made in treatment. The present paper is an elaboration of those mentioned, in so far as they relate to drug treatment.

Main Underlying Principles of Treatment

The underlying principles in the treatment of senile patients are threefold: (1) to avoid what may hasten degeneration, (2) to restore tissue and functional activity to the *normal senile* state, (3) to guard against the usual causes of death, from the moment of treatment.

Let me say something about the first of these principles. "Excessive stimulation hastens degeneration." This assertion may be taken as a medical axiom. There is a

[1] *New York Medical Journal*, October 12, 1912.

normal limit of functional activity, and an extreme limit of functional capacity. In the heart, for example, the normal functional activity of the left ventricle is a force of 51.5 pounds exerted about 70 times a minute. The limit of its functional capacity has not been determined, but the same force can be exerted 150 or more times a minute for a short period, but if carried much beyond this the maximum capacity is reached and the heart becomes paralyzed. In old age the maximum capacity of the organs and tissues is diminished and it may not exceed the normal functional activity of maturity. In the heart, while the maximum capacity is diminished, the functional activity is increased, to overcome the resistance in sclerosed vessels and increased viscosity of the blood.

In old age the two points, normal functional activity and extreme limit of functional capacity, are brought closer together. In other organs functional activity is diminished, but the capacity is diminished to a much greater extent and complete breakdown may occur upon even slight stimulation. Stimulation of an organ beyond its normal functional activity but within the limit of its functional capacity causes rapid degeneration through the diminished reconstructive ability in old age.

Among other facts to be remembered are the altered metabolism, the increased waste, the insufficient repair, the increased elimination of phosphorus, the diminished elimination of calcium, lessened assimilation especially of proteids, and the greater tendency of these to intestinal decomposition.

Attention to the Alimentary Canal

The good advice to "clean out, clean up and keep clean" applies with especial force to the aged; but there are some things that are cleaned out that are beneficial to the organism, while some things that are detrimental to the organism can not be cleaned out, and the only thing we can do is to keep them out in the first place.

The most important substance of the category last named is calcium. This element is necessary to the body, but an excess of it is the most important factor in causing rapid senile degeneration. Weil has shown, by his experiments, that the normal elimination of calcium is much reduced in the aged and that its elimination is not increased by augmented lime introduction; in other words, calcium is retained in the senile organism, and this excess is disposed of in various ways. The calcification of bone is one of the results; so also the ossification of cartilages. Deposited in blood-vessels, this calcium excess produces arteriosclerosis; precipitated in the joints, it causes gout and allied ailments; while, further, it is probable that when carried in the blood it increases the latter's viscosity and the tendency to coagulate, thereby favoring the formation of emboli, thrombi, and vegetations. Thus, however valuable the calcium salts may be in earlier life, they have no place in the therapy of senility. (They might, possibly, be of service in senile osteomalacia, but I have never heard of such cases.)

The second of the underlying principles of treatment is to make an effort to bring all the tissues of the body, and their functions, to the *normal senile* state. It is folly to attempt a restoration of the state of maturity. Functional activity sometimes can be raised to the norm of maturity, but it is then excessive, from the standpoint of the senile norm, and will result only in more rapid breakdown.

Tissue degenerating in the normal process of involution can not be brought back to the state of maturity. Skin grafted from a young person upon an aged one soon assumes the character of senile skin; but when the skin from an old person is grafted upon a young individual it retains its senile character.

The Aim Must Be to Support Nature

Disease in senility is either an increase, a decrease or a perversion in structure or function from the norm of senility, and so our efforts should be directed toward restoring this norm, and not that of maturity. The physician who fails to recognize the senile norm becomes discouraged when he finds that he is unable to eliminate the albumin in the urine or to diminish the ache in the stiffened joint, and then frequently resorts to more powerful remedies, thereby only doing positive harm.

Lacking scientific knowledge of the action of drugs and of other therapeutic measures upon the senile organism, any work dealing with such patients is simply empirical or experimental. Published reports of results from the various forms of hyphenated therapy are unsatisfactory and, hence, I shall confine myself in this paper to such forms of drug-therapy as have given me the most satisfactory results.

Owing to the uncertainty of drug-action upon the degenerate tissues as well as the frequency of secondary effects being more pronounced than the primary, or desired,

effect, substances natural to the system should be given, whenever possible, in preference to drugs not natural to the system.

Supply the deficiency where deficiency exists, instead of stimulating the organ to increased activity. No harm can result from an excess of lecithin, hemoglobin, sodium cholate, the enzymes, etc., as the system will not take up the excess. The same applies to vegetable substances that are readily metabolized, such as the nucleins and vegetable enzymes. On the other hand, some inorganic salts that are natural to the system are not readily taken up and, if absorbed, are almost wholly eliminated. I have repeatedly given iron salts and organic iron preparations to senile subjects having a low hemoglobin percentage, without the slightest effect, yet rarely fail to get results when giving hemoglobin or hemogallol.

The Use of Phosphorus, Strychnine, and Arsenic

I have had the same experience with phosphorus and lecithin. In neurasthenia and psychasthenia the lecithin will give good results; when, however, there is a marked increase in phosphorus elimination, the amount of phosphorus in the lecithin is insufficient to replace the waste. The normal elimination of phosphoric acid by the urine is from 40 to 55 grains daily. If increased by 5 grains, it would require about 100 grains of lecithin to replace the waste. In such cases I use the amorphous phosphorus in doses of 1 or 2 grains several times a day.

In senile debility I use amorphous phosphorus, strychnine, and arsenic. The strychnine must be omitted if there is cardiac hypertrophy, since further cardiac stimulation will hasten the degeneration of the organ. If there is no contraindication to strychnine, the arsenate in 1-128 to 1-64 grain dose is combined with amorphous phosphorus, 1 grain, given three times a day. In secondary arteriosclerosis the arsenic and iodine can be given in the form of arsenic iodide in 1-30 to 1-15-grain doses.

It is folly to try to restore a physiological senile arteriosclerosis; but many times this condition is traceable to a former syphilis, rheumatism, gout, diabetes or some infectious disease. Here arsenic iodide will be of service; however, if there is an iodide eruption or other indication that the drug is producing a physiological instead of a therapeutic effect, it must be discontinued. In such case we have a normal degeneration of the blood-vessels, and the best we can hope to do is to relieve the symptoms.

Cerebral arteriosclerosis usually produces the most distressing symptoms, prominent among these being headache and vertigo. These are due to cerebral anemia or an alternating cerebral anemia and hyperemia.[2] The vertigo accompanies the anemic phase of the disease, and here sodium nitrite in 1-grain doses will speedily relieve. Some persons have a peculiar idiosyncrasy to the nitrites, wherefore the effect of the first dose should be watched. If it produces a persistent erythema or a cyanosis, the drug must be discontinued.

If the cerebral anemia is accompanied by cardiac hypertrophy and a full, rapid pulse, aconite or aconitine may be added to the nitrite; but the coal-tar derivatives should not be used. They are of service only when there is cerebral congestion and the heart and lungs are in good condition—a combination rarely found in the aged.

Superiority of the Active Principles

A word about active-principle medication in senile affections. It is hardly necessary to discuss the general advantages of the active principles over crude drugs and galenics. But these advantages apply with greater force in senile cases, for the reason that the disadvantages of the galenical preparations are more pronounced.

Thus, in the senile condition, absorption and assimilation are slower, while in respect to many substances these functions are altered. Tannin-bearing drugs are absorbed slowly or not at all. This excludes many crude drugs and their tinctures from senile medication; for, being carried to the intestines, they here act as astringents, interfering with the already impaired intestinal peristalsis. The alcoholic menstruum of the usual galenic acts as an irritant to the stomach unless given during the progress of a meal, in which case it is mixed with the food and slowly absorbed. If taken only with meals, the drug is absorbed as slowly as the alcohol and food, and instead of getting a pronounced action we get an infinitesimal effect prolonged. Thus, if we give 5 minims of tincture of aconite during a meal, we shall get the effect of about 1-10 minim every few minutes. In case the vegetable drug is given in the crude state, its action is slow and uncertain, owing to the mass of inert material present, and cumulative effects are produced if the dose is repeated.

Many vegetable drugs depend for their action upon the hydrochloric acid of the

[2] *New York Medical Times*, November, 1912.

stomach, which liberates and dissolves the active constituents. But the acid of the stomach is diminished in the aged and may even be absent an hour or two after a full meal.

The alkaloids or their salts are freely soluble and readily absorbed. The glucosides, resins, and oleoresins are carried to the intestines, where there is much less interference with digestion and absorption than in the stomach, as there are a number of enzymes, besides the bile, to convert these substances into readily absorbable material. When there is a deficiency of bile, the resins and oleoresins may pass through unchanged; hence, when giving this class of drugs to the aged, it is advisable to add the bile-salts.

Watch the Secondary Effects of Drugs

We must always remember secondary effects when giving drugs, as these sometimes produce unexpected results. In a former paper I have called attention to the secondary effect of belladonna when combined with aloin, the same nullifying the action of the latter in senile constipation. The secondary effect of digitalis and its glucosides upon the blood-vessels, of strychnine upon the heart, of opium and morphine upon the respiratory centers, of aloes and aloin upon the pelvic vessels, of the iodides upon the stomach, of iron upon the intestines, and so on, often is more pronounced than the actual effect aimed at in senile disorders. So far this phase of senile medication has received no attention at the hands of the profession, and, yet, it is responsible for many deaths.

In this connection I will mention one case in point, one to which I have already referred in a recent paper.

The patient, aged 68, suffering from trifacial neuralgia, expired five minutes after taking a powder consisting of 1-4 grain of morphine and 1-120 grain or atropine. On former occasions this combination, given hypodermically, insured speedy relief. This time it was given by mouth, and death resulted from respiratory paralysis. The combination is rational, as the atropine, which is a respiratory stimulant, is intended to overcome the respiratory depression produced by morphine. But morphine acts in the healthy empty stomach in from five to ten minutes, while atropine begins to act in only from twenty to thirty minutes; and in this instance the harm was done by the morphine before the atropine had begun to act. Such occurrences show that we must know not alone the physiological antagonists but the rapidity of their action as well when prescribing such combinations.

Staying the Hand of Death

Taking up the third of the underlying principles of treatment of senile patients, I can not impress upon the mind too strongly the fact that, "in maturity, nature cures; in senility, nature kills."

Degenerate senile organs and tissues can not accommodate themselves to impaired functions of allied organs and tissues as they can in maturity. In their efforts to do so they hasten their own degeneration, and there is no restoration or repair of tissue undergoing senile involution. Furthermore, in every case of senile disorder, however mild it may be, there is always the danger of a fatal issue, not alone as the direct result of the disease, but as a consequence of secondary diseases in allied organs.

Death in the aged may be due to general exhaustion, to exhaustion or paralysis of the heart, paralysis of the lungs, or toxemia.

Keep up the patient's strength by small doses of alcohol, together with phosphorus or lecithin combined with arsenic. Give strychnine if the heart is weak; not, when it is strong. Watch the heart—not the pulse, but the heart. If the heart becomes slow and weak, give sparteine; if rapid and weak, give strophanthin. If the heart becomes weak but the rate is normal, stick to strychnine. Dyspnea or shallow breathing calls for atropine.

Toxemia may be due to intestinal decomposition, retention or suppression of urine, carbon-dioxide poisoning (incomplete aeration) or to other toxic material in the system. The indications in the case of intestinal decomposition are clear: thorough elimination and intestinal antisepsis.

Draw off the urine with a catheter. If there is none and the patient has not passed any urine in six hours the patient has uremia. Give hypodermically 1-10 grain of pilocarpine and 1-64 grain of strychnine; or 1-32 grain of strychnine if the heart is weak, as the pilocarpine will still further weaken it. In appropriate dosage, the nitrate of potassium or of sodium will act as a diuretic in about three hours. The vegetable diuretics are too slow in an emergency. They should be employed from the onset of a febrile condition or if the amount of urine passed during twenty-four hours is less than 700 Grams.

Carbonic-dioxide toxemia, evidenced by cyanosis, requires, first of all, increased pulmonary activity by means of atropine.

The nitrites may be given if the face is sallow cyanotic; but if it is purplish cyanotic, showing cerebral hyperemia, a further influx of blood through vasodilatation will cause cerebral hemorrhage. Oxygen is usually the last resort.

The discussion of the bacterial toxemia of infectious diseases would carry me beyond the limits of this paper. I have referred in this paper to a number of drugs not generally employed; these remedies have served me well in senile cases, and they will serve equally well every physician who will take sufficient interest in his senile patients to study them as thoroughly as he does the young. Look to the bowels, watch the heart, and make the old man feel that he is not as old as he looks.

The Clinical Congress of the Surgeons of North America

A Review of the Third Annual Session, Held in New York, November 11 to 16, 1912

By SAMUEL W. KELLEY, M. D., LL. D., Cleveland, Ohio

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THE brain-child of a surgeon-journalist has grown to be a giant. 'Tis true that it has been fostered from its inception by a general manager of uncommon generalship and that its growth is due to friends who are the leading surgeons of the country—which is as much as to say, of the world. Yet, Dr. Franklin H. Martin has great reason to be proud, as the father of "The Idea."

In the third year of its life, the Clinical Congress has grown to such size that a resolution was passed to consider limiting its membership. Up to Friday of the week of the meeting, 2800 had registered. There was talk of limiting the membership, in the future, to 2000.

Evening Attractions

And what were the attractions that drew all these busy men to New York? Well, there was a series of evening lectures, at the Waldorf-Astoria. Monday evening Albert J. Ochsner gave his address as retiring president; President Edward Martin's annual address dealt with hepatic cirrhosis; while William J. Mayo lectured on the surgery of the spleen. On Tuesday Geo. W. Crile was heard on anesthesia and the anoci-association; Otfried Foerster, on excision of spinal nerve-roots; Chas H. Frazier, on surgery of the spinal cord; D'Orsay Hecht, on the surgery of the cord (neurologic side). On Wednesday Richard R. Smith discussed the enteroptotic woman; W. Arbuthnot Lane, chronic intestinal stasis; John G. Clark, gastrointestinal stasis; Robert C. Coffey, replacing and retaining operations in gastric and intestinal stasis; Joel E. Goldthwait, orthopedic principles in enteroptosis and chronic intestinal stasis. On Thursday evening, at the Academy of Music, Brooklyn, W. W. Chipman treated problems of obstetrical practice; Thomas S. Cullen, operations for cancer of the uterus; Wilhelm Weibel, the Wertheim operation; X. O. Werder, cautery in the treatment of cancer; George Gelhorn, radical operation through the vagina for uterine cancer. At the Astor Gallery, also on Thursday evening, Chevalier Jackson held forth on the subject of bronchoscopy, esophagoscopy, and gastroscopy; Myles Standish, on the extirpation of the lacrimal sac; and Ewing W. Day, on otitic meningitis. Friday, the last evening, E. G. Abbott spoke on lateral curvature of the spine; John B. Murphy, on the surgery of the bones and joints; E. S. Judd, on prostatectomy. Besides, each evening there were prepared discussions by various able men. One can not attempt here to give even brief abstracts of the evening addresses, but a few thoughts from two of them may be presented here.

The Retiring President's Remarks

Dr. Ochsner spoke of the nobility of service to humanity and of the lines of usefulness of the Congress. He said there was a time when wealth, victory in combat or personal

aggrandizement was the measure of a man's greatness, but in this era it was recognized that service was the highest element of achievement. Education should include the ethical development which leads to willing personal service. If men came to the meetings only to improve themselves for their own profit, this Congress was a failure. But, if it brought about better service to the people, then these conventions were a useful element in American progress.

Through the exchange of ideas at the Congress many important facts will be carried by the men to their homes all over the country and utilized for the benefit of their patients. Among the younger men, there are many who are doing excellent work, and this would give them an opportunity of demonstrating their ability and their methods, and by comparisons each learns to appreciate better another's work; and thus development of provincialism is presented. The witnessing of another man's work is a great stimulus, also, to scientific reading, and by personally knowing men one places a more just estimate upon their writings. Continual study is necessary; indeed, the great surgeons of the country quite generally have acquired their knowledge and skill after leaving medical school. If one should select ten of the surgeons who rank highest in the estimation of the profession in this country, not more than three or four of them would be found to have had a university education; it is those who have been inspired with lofty enthusiasm and who studied constantly who have risen to high rank.

The Treatment of Hepatic Cirrhosis

The address of the president, Dr. Edward Martin, dealt with the treatment of hepatic cirrhosis. The approach to the liver, Dr. Martin declared, must be adequate for sight, touch, and manipulation. The incision recommended was one vertical through the rectus muscle to within two finger-breadths of the umbilicus, with a second incision transversely, at right angles to the first. The most serious obstacle in surgery of the liver, he said, is hemorrhage. It is the flow of blood that has retarded surgery of the liver so much more than surgery of the kidney. The liver possesses no mechanism for controlling hemorrhage, but its structure is such as to favor it, for the large vessels are held open by their attachment to the parenchyma. In many pathological conditions the tissue is rendered still more brittle and easily traumatized.

However, the blood pressure is quite easily controlled by finger pressure on the vessels. It had been found experimentally, by taking a liver and attaching to it a water supply with measured pressure, that the flow could be controlled by manual pressure without damage to tissue. Also, it could be controlled by stitching around a given area. A needle was used about the size of an ordinary knitting-needle and blunt-pointed, so that it could be pushed through the tissues without probability of its piercing large vessels. The needle could be bent at any angle and was provided at one end with a socket into which could be screwed the catgut ligature. The ligature filled the lumen of the needle track and so packed the channel. The experimenters used triple and quadruple catgut and closed the wounds with a mattress suture. If the tissue proved to be brittle, they put a muscle flap, usually cut from the rectus, across it and stitched the wound through the muscle-tissue. These muscle flaps were found excellent for hemostasis.

It seemed rational, Dr. Martin thought, that decapsulation, which has proven so excellent a procedure in kidney surgery, might be of advantage in hepatic cirrhosis. Decapsulation produces more superficial traumatism when done upon the liver than in the case of the kidney. He believes that ascites is an advanced condition of hepatic cirrhosis, and not due to back pressure, but to the diseased condition of the endothelium of the peritoneum. As a remedy for the ascites, he had endeavored to modify the collateral circulation. In pursuance of this purpose he had selected the vena cava and iliac veins, and had made anastomoses upon the cadaver, with apparent success.

The Clinics and Demonstrations

The official directory and bulletins of the Congress listed 92 different hospitals, sanitaria, dispensaries, and laboratories in which surgical clinics and demonstrations were going on, every day, all the week, filling the hours from 8:30 in the morning until late in the afternoon, and presenting in the aggregate elaborate programs, from which the visitor might take his choice in general surgery, gynecology, obstetrics, genitourinary surgery, ophthalmology, otology, laryngology and rhinology, orthopedics, radiology, and laboratory work, all in great numbers and variety.

On opening the session, Dr. George E. Brewer, chairman of the Committee of Arrangement, announced that there was nothing

spectacular to be shown and that those who expected to see extraordinary operations, rare methods and unusual cures would be disappointed. He said the New York surgeons would demonstrate only methods practised daily, with a maximum of safety and a minimum of discomfort to the patient.

And this was a very good preparation; for, to be frank, the average visitor was not carried off his feet by any remarkable brilliancy of surgical acumen or technical skill or pedagogic power displayed individually by the men of the metropolis. But the general level of the week's work was high-class. When I mention a few practical points, in detail, it is not with the inference that these are by any means all that were worth while; but more are not instanced because space is limited.

Osteoplasty in Pott's Disease

Hibbs demonstrated at the Orthopedic Hospital an operation for immobilizing the diseased vertebræ in spinal caries. This procedure has been published, early in its history, but the originator has used it in now nearly a hundred instances, which show good results. It is advised for all ages and at all active stages. The operation is performed as follows:

Cut down medially upon the spines of the kyphos and include one above and one below those diseased, as shown by a radiogram of the deformity. Divide the periosteum and intraspinous ligament and lay bare the spines and the laminæ, pushing the soft parts laterally as far as the bases of the transverse processes. Beginning with the lowermost one, each spine exposed is cut partly through, upon the upper side near its base, and bent downward until its tip rests upon the bone below it. A small piece of bone is now raised from the lower edge of each lamina and turned downward upon the lamina below it. The soft parts are now sutured over the bones with chromic gut, and the skin incision is closed. Gauze dressing is put on and then the usual brace, with enough width between the upright bars so as not to press the wound.

The patient is kept in bed ten weeks, and must wear the brace for five or six months. You know what happens where periosteum is raised from bone—new bone is deposited between the surfaces. The spine is stiffened over the area of the operation.

Albee demonstrated transplantation of the crest of the tibia into a cleft made by splitting the spines of the kyphos, and claims good results in immobilizing and consequently curing. Both operations need more time yet to test ultimate effects. The former plan seems the more reasonable.

Carrel's Blood-Vessel Suturing

Carrel's demonstrations of blood-vessel suture, at the Rockefeller Institute, were, as might have been expected, well attended at every repetition. Speaking of Carrel, the assembly in his honor, in celebration of his winning of the Nobel prize in surgery, took place at the College of the City of New York, on Saturday the 16th. This was no part of the Surgeons' Congress; but many of the visiting surgeons attended. President Taft and Ambassador Jusserand took prominent parts, and the platform was crowded with city officials and notables in the pedagogic world, while the hall held an audience estimated at four thousand.

Operation for Relapsed Clubfoot

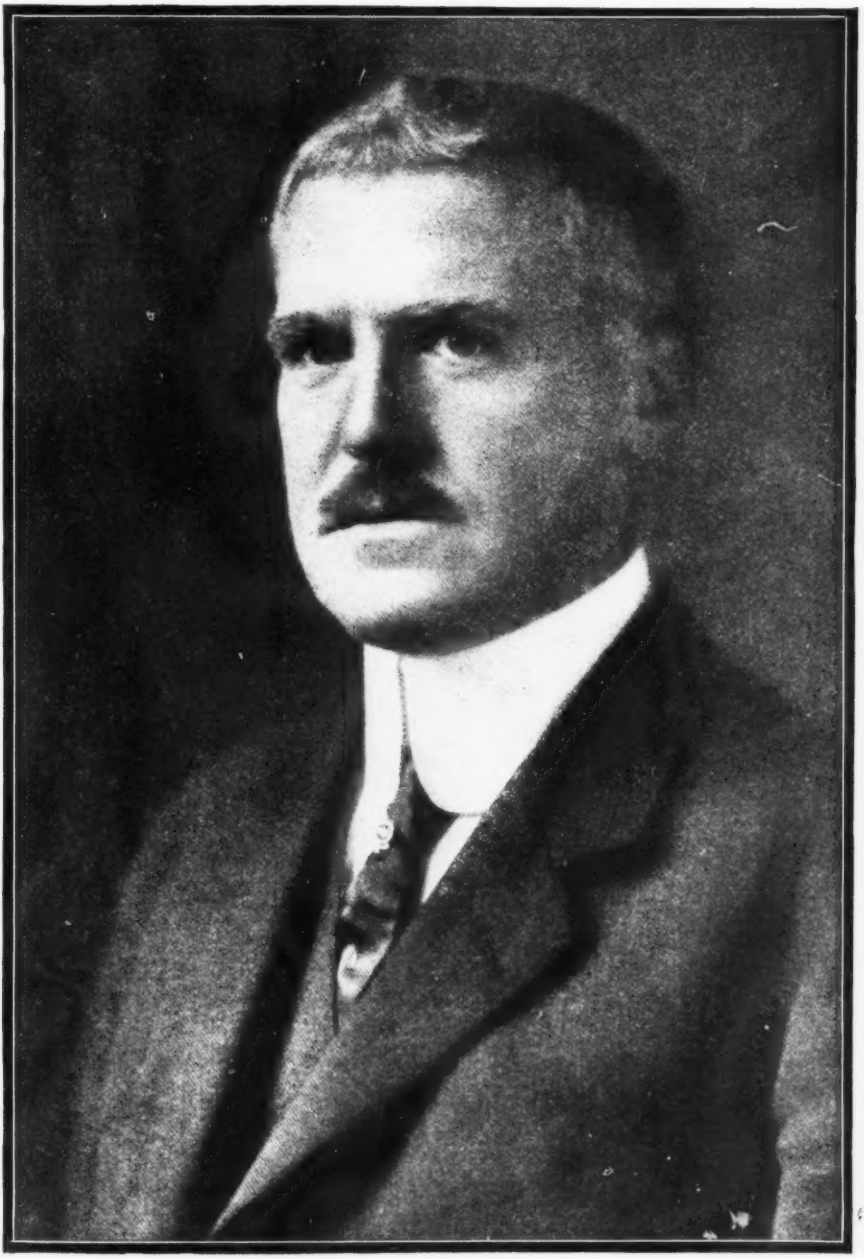
H. L. Taylor had announced that he would perform Cook's operation for relapsed clubfoot, on Wednesday at the Post-Graduate College, but, instead, he produced A. G. Cook (of Hartford) himself, who did the operation. This operation has not as yet been published, but may here be described as follows:

First, if necessary, the fascia is divided subcutaneously on the inner side of the foot, and also the heel-cord, and then as much correction as possible with the hands is made. Then a perpendicular incision is made through the skin and superficial fascia, just in front of the external malleolus. With an osteotome, a large wedge of bone is removed, the first incision being just in front of the fibula. The apex of the wedge reaches clear through the bones. No attention is paid to the periosteum or the peronei tendons. If the wedge removed is large enough, the foot can now be brought easily into a corrected position and the outer border elevated by giving the foot a quarter turn. Only skin sutures are used.

Cook modestly says the operation is simple and easily performed—"and the proof of this statement is, that I can do it." He uses a light splint in preference to a plaster cast, and sometimes lets young children walk at the end of the second week. A dressing is worn six or eight weeks, then the ordinary shoe is put on.

A New Hospital Building

The new Hospital for the Ruptured and Crippled is a large and fine affair, and when completed and equipped is intended to be



Dr. Edward Martin

The Philadelphia Surgeon who presided at the last meeting of the Congress of Surgeons of North America, recently held in New York

as complete for its purpose as one can be made. It is almost ready for occupancy and on Friday the 15th it was open for a personally conducted tour of inspection by the orthopedic surgeons under the leadership of Virgil P. Gibney. After a speech of welcome by W. C. Osborn (layman), president of the board of trustees, the first surgical use of the building was made in the demonstration by E. G. Abbott, of Portland, Maine, of his method of treating lateral curvature of the spine. A description of this procedure would take too much space here, but I want to comment, in passing, that it will, I think, lead to renewed interest in the study of this class of cases and to more cures being effected; but that there will be a decided moderation in the haste for quick results that characterizes the early claims for the method.

Transfusion with Brewer's Tubes

A demonstration of one of the most useful of surgical procedures was made at the Babies Hospital by W. A. Downes. It was direct transfusion done with the Brewer tubes.

The small glass tubes are boiled in liquid albolene [white liquid petrolatum]. The artery of donor and vein of donee having been exposed and dissected up a distance of an inch or more, a small tape is passed around each vessel and pinched with a hemostat and the vein is ligated and cut proximally and the artery distally to the tape. The projecting end of each vessel is then washed out with salt solution and smeared with albolene. A tube of the right size for the vessels is selected and shaken (to free its lumen of albolene), an end is introduced into each vessel and tied with silk. The small amount of air in the tube may be entirely disregarded. The tapes being now loosened, the blood flows through the albolene-coated tube with no danger of coagulation.

This is really the easiest method yet devised for transfusion; and it might be said to be "so simple that a child can use it," if only someone would find an easy way of taking up the vein in a bloodless infant. It has occurred that neither the median cephalic nor median basilic were successfully isolated, and recourse was had to the cephalic, the basilic or saphenous. If you have a friend who boasts that transfusion is always easy, induce him to try it in a bloodless or hemorrhagic infant.

The Newspapers and the Congress

It is worth while briefly to notice the part taken by the newspapers in giving publicity to the doings and sayings of the Congress. Of course such items are most avidly seized upon as are capable of being worked into a sensational story with eye-opening headlines. Thus "Buzz-saw Run by Electricity Used to Cure Human Skull" introduces an account of Dr. Hartwell's operation at Bellevue. And there is the free handling of technical terms and that flippant disregard for scientific accuracy which usually marks the newspaper medical article. Thus the thrilling tale of a "Silken String Used as a Jig-saw on a Patient" describes in detail a demonstration at St. Luke's Hospital by Dr. Robert Abbe of "stricture of the esophagus or clogged windpipe"—an operation by which "a silk thread is run down the windpipe, followed by an incision in the stomach and the use of a see-saw movement with the thread cutting the sides of the stricture." Incidentally (of course it is quite incidentally and unavoidably during such a series of clinics) the doctors themselves get some free advertising; but, really, there was less of individual posing under the spotlight during this meeting than one has sometimes witnessed.

Notwithstanding all the yellow tendencies of the average newspaper, and all their inaccuracies, and all the spreading on of printer's ink to ease that itch for notoriety which afflicts some members of the profession, there is no doubt of the value of the papers in enlightening the public in a general way upon medical topics. The people get some sort of conception of the wonders of modern medicine and are more inclined to apply for relief, and they do it with more hope than formerly of receiving aid.

Publicity in Regard to Cancer

At this session the Congress of Surgeons took action to enter deliberately upon a campaign of publicity in regard to the early symptoms of uterine cancer, its curability if attacked surgically in an early stage—and only then—and the necessity for every woman on her first discovery of indications to apply at once th her physician. A committee was appointed, and in due time the newspapers and magazines and other suitable channels will be used to aid in this important labor for the good of womankind.

Fatal Stovaine Anesthesia

One incident occurred during the Congress, that, being widely discussed by the newspapers, did not redound to the glory of surgery or promote public confidence in the profession.

A man aged about fifty years, patient of Dr. William Seaman Bainbridge, was about to be operated upon, for hernia, under spinal anesthesia. I cannot speak from personal knowledge, but it is related by those who were present that the demonstration of the administration of stovaine in the spinal canal was done on the third floor of the Polyclinic Hospital and that after the injection the patient was removed to the operating room on the ninth floor, where he died, before the operation was begun. The case was in the hands of the coroner, and I should surmise that one among the interesting questions raised at the inquest will be, how much and in what manner a patient ought to be handled or transported after receiving a spinal anesthetic—or, for that matter, any anesthetic.

Friendly Criticisms

Now, having assumed an attitude of friendly criticism, let me comment on two or three points relative to the recent clinics. The main object of the Clinical Congress is, I take it, to improve the science and practice of surgery. If so, why does operative surgery receive nine-tenths of the time and attention at the clinics? More often in the practice of a real surgeon the history, the examination, the diagnosis, the pathology, the prognosis, the indications for the operation, the choice of operation and other subjects are nine-tenths of his real work, and the operation itself sometimes the least important in the whole series of efforts. Yet, in the great majority of clinics, what is done?

One of the house-doctors, while fumbling his papers, gives a few items as to age, sex, time of admission, and some laboratory findings, then the surgeon picks up his knife and makes his incision. How seldom do we see the groundwork of the case cleared, the condition stated and classified, the proposed operation described and the reasons "why" given, all in clear, clean-cut sentences, as John B. Murphy does it? How rarely does a surgeon think, and think aloud as he works, and by his remarks, few but to the point, allow you to follow his reasoning over the case as one is privileged to do at Albert J. Ochsner's clinics. How often does one witness such lucid demonstrations as those of John G. Clark?

These are high standards to set, but they should be attempted, at least in a measure, in institutions of learning and in clinics held for the purpose of promulgating scientific knowledge and the demonstration of methods and technic.

Further, every surgeon who essays to teach surgery in the amphitheater, at the operating table, should learn to work and should train his assistants to place themselves and to work in such a manner that spectators can see what is going on. It is a matter of practice. Many operations can be done equally well with the surgeon and his necessary assistants all on the same side of the table. In some of the clinics there are too many assistants, anyway, for the good of the patient.

One observes some other opportunities for improvement even in the great clinic of a big city like New York. Let me ask a few simple questions: Is there any good reason why an operating-room should not be well ventilated? Does warm air necessarily mean that the air should be stagnant and rebreathed air, laden perchance with germs of pneumonia or grip, furnished by some among a score or two of spectators? Is it fair to bring an anesthetized patient, and another, and another, into a room like that without a change of air? Could not fresh, pure, properly tempered air be introduced from below without risk of draught or dust-carrying currents? The answers are obvious.

Committee on Hospitals

I commend the subject of the air of operating-rooms to the committee appointed to standardize hospital equipment and hospital work. The resolution recommending such a movement was introduced by Allen B. Kanavel and he was made chairman of the committee with that duty before them.

Preparation for Surgical Practice

Other important resolutions were introduced by Franklin H. Martin. They advocated the standardizing of surgical education and practical training, so that every physician who desires to practise surgery, in addition to his degree of M. D. must have been recognized and registered as a competent surgeon before he is allowed to perform surgical operations. The resolution proposes that colleges and other appropriate authorities shall be vested with power to award supplementary degrees to physicians qualified for surgical work. Dr. Martin said:

"I believe that this largest organization of surgeons on the American continent should assume the responsibility and the authority for standardizing surgery. This can begin at once by this body authorizing the appoint-

ment of a thoroughly representative committee, which committee shall have power to act alone or in conjunction with other committees invited to join them, along the following lines.

"It should formulate a minimum standard of requirements that should be possessed by any authorized graduate in medicine who is allowed to perform independently operations in general surgery or any of its specialties.

"The committee should consider the desirability of listing the names of those men who desire to practice surgery and who come under the authorized requirements.

"The committee should seek a means of legalizing under national, colonial, state or provincial law a distinct degree, which shall be conferred upon physicians possessing the requirements recognized by this law as necessary to be possessed by operating surgeons.

"It should seek cooperation with the medical schools of the continent which have the right to confer the degree of M. D. under the recognized standards and should authorize those colleges to confer the supplementary degree of surgeon on such of their graduates as have, in addition to their medical course, fulfilled the necessary apprenticeship in surgical hospitals, operative laboratories and actual operative surgery.

"The committee should authorize and popularize the use of this title by men upon whom it is conferred, and its use should especially be urged in all directories of physicians in order that the laity as well as the medical man can distinguish between the men who have and the men who have not been authorized to practice surgery.

"I believe that the time has come for a concerted action on the part of the great body of thinking surgeons on this continent to insist that the surgeon of the future shall not only be thoroughly educated in the science of medicine but that he shall have a thorough training in the technic of surgery under the direction of a practical surgeon before he is legally or morally allowed to operate upon the public.

"This is not, it seems to me, open to argument. This would protect unsuspecting patients who have no way of discriminating between trained surgeons and the tyro and would protect and put a premium where it belongs, on the conscientiously trained surgeon."

The resolutions were adopted, and the following committee was appointed: Edward Martin, Philadelphia; Rudolph Matas, New Orleans; W. W. Chipman, Montreal; John M. Finney, Baltimore; Franklin H. Martin, Chicago; Albert J. Ochsner, Chicago; Emmett Rixford, San Francisco; F. J. Cotton, Boston; Geo. E. Brewer, ex-officio, New York.

Officers Elect and the Next Meeting

The Congress elected the following officers: President, George Emerson Brewer, New York; vice president, W. W. Chipman, Montreal; general secretary, Franklin H. Martin, Chicago; general treasurer, Allen B. Kanavel, Chicago; general manager, A. D. Ballou; chairman of the committee of arrangements for 1913, E. Wyllis Andrews, Chicago.

The next meeting will be held in Chicago, time to be determined.

How I Treat Lobar Pneumonia

A Method Which Has Given Success

By GEORGE H. CANDLER, M. D., Chicago, Illinois
Author of the "Every-Day Diseases of Children"

ACUTE lobar pneumonia is now generally recognized as being a specific fever—not the mere local congestion with symptomatic hyperpyrexia described by writers of twenty-five years ago, and even later. In a vast majority of cases the diplococcus pneumoniæ (pneumococcus) is the causative microorganism, although at times streptococci, staphylococci, and the micrococcus catarrhalis may predominate or be alone discoverable in the sputum.

The pneumococcus generates a poison (pneumotoxin), and the severity of the disease depends, not only upon the extent of lung involved—as so many physicians still believe—but, as well, upon the degree of virulence of the toxin and the presence or absence in the blood of a neutralizing substance (antipneumotoxin). The virulence of the pneumococcus varies remarkably; and as it is widely distributed—being found upon the mucous membranes of the mouth, nose, and throat of

many individuals during the months of "colds"—there doubtless are numerous cases of true pneumonia so mild in character as to escape definite classification. It is not unusual for the pathologist examining sputum from a patient supposedly suffering from an acute bronchitis to find the pneumococcus present in considerable numbers, and careful auscultation in such cases almost invariably will reveal typical pulmonary lesions.

Why Some Succumb and Some Escape

The healthy individual invaded by pneumococci of a comparatively nonvirulent type is able to produce antibodies rapidly enough to prevent profound systemic disturbance, while the diplococci themselves are speedily destroyed. Upon the other hand, the virulence of the pneumococcus may be intense or the resistance of the infected individual so diminished that toxins are produced more rapidly than their antibodies, when, as a result, hyperpyrexia is developed, and the disease runs its classical course—which numerous physicians in practice still believe can not be shortened or even materially modified. For all that, in the great majority of cases, an oncoming pneumonia can be aborted; and there is no stage of the disease in which correct therapeutic procedures will not modify conditions to a greater or less extent.

I positively assert that any medical man who at this day regards pneumonia as a self-limited disease, destined by an all-wise Providence to run a certain course, not alone acknowledges his incapacity as a therapeutist but, worse, an unwillingness or inability to grasp thoroughly demonstrated etiologic facts.

The Basis of Rational Medication

All "positive" rational medication must be based upon a clear conception (1) of the normal, which *should be*, and (2) of the pathological conditions which *are* present in the individual under observation. For instance: If pneumonia is regarded as a localized inflammation due to sudden and severe chilling of the body surface and the hyperpyrexia as a mere evidence of suboxidization or an effort of nature to dispose of the "products of congestion," it is not likely that the treatment instituted will be very effective. The very first essential is to antagonize the inimical organisms in the blood and tissues and to inaugurate conditions unfavorable to their propagation. We believe, then, in eliminating, as rapidly as possible, body-waste and toxic substances generally, realizing that full organic activity and a normal degree of resistance can not exist in an autotoxemic individual.

Therapeutic cleanliness of the intestinal tract having been secured, it really is not difficult to increase materially phagocytic activity and cause the rapid destruction by natural forces of the invading bacteria. Some of the methods of treatment advised prove almost as destructive to the patient as to the pneumococci; enormous doses of drugs, supposed to be bactericidal, are given at frequent intervals, causing derangement of the stomach and exerting an inimical effect upon the blood itself. If nutrition is thus further impaired and the natural resisting forces are weakened, it becomes a question whether the patient's vitality will prove sufficient to enable him to survive the injuries wrought by the physician in his effort to cure the pneumonia.

Startling experiences of this kind—patients dying from exhaustion just when the disease seemed to be under control—doubtless led to the adoption of the "expectant method" of treatment, with a consequent reduction of the death-rate to eight percent from the former of twenty-one. However, these figures are based upon hospital practice. The family physician still found himself losing an uncomfortably large percentage of patients and so, in pure self-defense, felt it desirable at least to try the various procedures advocated by enthusiastic individuals who claimed to have "treated ten, twelve, twenty pneumonia patients, without losing a single one by death."

The Multiplicity of Methods

Naturally it was not easy to decide between the multiplicity of treatments advanced and praised. Perhaps he could not persuade himself readily that the "best" method was to employ hot water, externally, internally, and persistently, meanwhile pushing diaphoretics and diuretics until the patient resembled a wet sponge. Neither was it a simple matter, sometimes, to convince the man down with pneumonia, or his friends, that the temperature of the bed-room should be as near the freezing-point as possible, when some other practician in the neighborhood was "saving his patients" (or some of them) by shutting out every breath of fresh air and compelling the inhalation of medicated vapor.

Then, just as the average conscientious doctor had winnowed out the good things, as he conceived, from the mass of theoretical chaff, some "eminently scientific" physician proclaimed that he had dropped all drugs

and douchings, whether hot or cold, but was injecting a serum liberally. As a result, it was found, some patients thus injected recovered promptly; in others the disease ran the "usual course," while a certain number died rather quickly. Then, again, it seemed that the therapeutic nihilists had good grounds for terming pneumonia "a self-limited disease not to be influenced by the use of medicines." Doctors who had not adopted serum derided the users and, in turn, ridiculed the idea that the pneumococcus could be destroyed either by the internal or the external use of any medicinal agent.

What is Rational in Treatment?

Amidst all this uncertainty and confusion a certain number of men stood firm, asserting, as a principle, that it was irrational to treat "pneumonia"—or any named disease—but that, with a clear understanding of the pathological conditions present in each individual instance, it was comparatively an easy matter to select the appropriate and effective remedies for their correction. Moreover, these men—and each day their number increased—stated emphatically that they were able to abort the on-coming disease-process in the great majority of cases.

The authorities and laboratory men answered: "It is absurd to draw conclusions as to the efficacy of any medicinal measures, since pneumonia is prone, when left to run its natural course, to terminate suddenly and rapidly in complete recovery. It is, therefore, quite unjustifiable, however good the results that follow your treatment may be, to maintain that they are *due* to that treatment and not merely the natural issue of a series of remarkably benignant examples of the malady."

However, practicians of experience who are capable of acute observation and quick perception believe themselves able to distinguish between a long series of consequence and a chain of mere coincidences; and when, day after day, in case after case, they have secured uniformly beneficial results from definite remedial procedures they feel that they can trust their own senses and naturally conclude that such success is due to their own intelligent efforts.

Heretofore, perchance, their patients have been confined to their beds for from two to five weeks and then entered upon a tedious period of convalescence; now, nine out of ten are discharged within ten days, and moreover, their physical condition after recovery as a rule is good.

So long as such favorable reports were coming from a few dozen physicians only, located in remote parts of the country, the therapeutic nihilists and advocates of an "expectant treatment" contented themselves by saying that "these men have either erred in their diagnosis or have to deal with a peculiarly mild infection. To claim to be able to cure or abort a true case of pneumonia on the face of it is absurd."

However, the doctors who were "doing things" recalled the fact that Harvey had been called "absurd," "idiotic" and "criminally ignorant"; that Morton was scoffed at, and Lister derided by "the heads of the profession," and so they quietly went along curing pneumonia and reporting success.

About this time, serious outbreaks of pneumonia occurred in several states and physicians practicing along accepted lines lost very many of their patients. Those, however, who had recognized the force of the arguments advanced by the socalled positive therapeutists, and saw they were backed by results, adopted their method of treatment and scored successes which startled their rivals and caused a very general revision of opinion throughout the territory affected.

People refused to take tartar emetic, or huge doses of quinine and, in spite of it all, remain ill for weeks. They objected also to being starved and left to fight the fever themselves when their friends, under some other doctor's care, were up and busy just about the time when their crises were due. So, partly from example and partly by compulsion, hundreds of practitioners adopted that "absurd" treatment and, ridiculous as it may appear, immediately ceased to consider pneumonia a "self-limited disease" with, in certain cases, an inevitably fatal ending.

Naturally there were, and are, failures. Every physician is not a careful diagnostician or familiar enough with his materia medica to select the right remedies for the pathological conditions present in his patient at the time. Neither are *all* practitioners thorough enough to see that the medicines provided are given *to effect*, and that the general procedures are carried out as ordered.

A Busy Doctor's Error

One extremely busy and rather successful man fell into the habit of prescribing exactly the same drugs in the same doses and alternation for every pneumonia patient. It so chanced that his success in the first case or two brought him several more patients who were "threatened with pneumonia" and as

any treatment is naturally more effective in the earlier stages of the disease, his routine methods yielded good results. Then he was called to see an elderly man troubled with enteroptosis who had been ill for five days under another physician's care.

His temperature was extremely high, sordes covered the teeth and the skin was harsh and dry. Auscultation revealed a mitral lesion, and the left lung was extensively involved. The twenty-four hours' output of urine did not exceed 14 ounces. Calomel, 1-6 grain, was given, with an equal quantity of podophyllin, every hour for six hours, with a saline draught two hours later and aconitine hydrochloride, gr. 1-800, veratrine, gr. 1-64, and digitalin, gr. 1-64, ordered continued half-hourly "until the temperature falls to 100° F." Calx iodata and bryonin were exhibited every two hours. One of the glycerine pastes was applied hot to his chest.

All these are very proper procedures in nearly every case, but unfortunately the calomel, podophyllin and laxative saline given this patient could not, under the circumstances, completely unload the feces-laden intestine, and with toxins being constantly absorbed therefrom aconitine—even when exhibited half-hourly—could not control the temperature. Moreover, the laboring heart required support, not a whip. The medicines were given faithfully for twelve hours. The bowels did not move, the skin remained dry, and the patient died after the twenty-fifth dose of aconitine and veratrine—from "syncope," the doctor said.

Had the bowel been thoroughly flushed and free catharsis and diaphoresis secured, the heart meanwhile being supported by the use of caffeine and strychnine, the temperature would have fallen under comparatively a very few doses of aconitine. To push this drug together with veratrine—or for that matter to give *any* antipyretic while the bowel is loaded with fermenting and putrefying fecal matter—is as absurd as to try to extinguish a fire among barrels of oil by throwing water on the shed containing them.

Adaptation of Treatment of Individual Needs

The physician who would secure the most positive results in the shortest possible time must think and must adapt his treatment to individual requirements. The essential remedies are few, but the size of dose and period of administration varies materially. If the patient is seen early enough (and it is well to teach our patients the importance of prompt treatment) *thorough* elimination—renal, dermal and intestinal—and the intelligent use of aconitine, digitalin and veratrine (or strychnine in asthenic cases), with guaiacol carbonate, calx iodata and quinine arsenate as alternants, will ordinarily serve to cut short the disease.

Forty to sixty minims of guaiacol may advantageously be rubbed well into the chest and then hot epsom-salt compresses, covered with flannel or a glycerine paste, should be applied. Such a dressing must not be heavy and should be changed every four to six hours. The application of ice-bags to the thorax "to reduce congestion" in a patient whose emunctories are inactive is decidedly poor practice.

Of course the patient must be put to bed in a quiet, well-ventilated room, the temperature being maintained at 60° F., or thereabout. The body should be sponged with a warm epsom-salt solution (one ounce to the quart) daily and an alcohol rub should follow. Barley water or a diluted fruit juice may be given freely and a daily tepid or cool saline enema ordered. Milk and seltzer, clam bouillon, albumen water, or buttermilk are allowable as foods. A robust patient who rebels at "slops" may have a little well-cooked rice, dipped toast, asparagus tips on toast, baked custard, soft-boiled egg, zwieback or a few raw oysters.

The mouth and nares must be kept clean by the frequent use of an alkaline antiseptic solution. One compound menthol tablet to eight ounces of water meets the requirements perfectly. A little glycerin may be added. If the mouth is extremely dry glycerin must not, however, be used, but the cavity sprayed occasionally with liquid petrolatum.

It is essential to secure therapeutic cleanliness and force elimination. It is not enough, however, to *prescribe* calomel, podophyllin and laxative salines at such and such intervals; the doctor must assure himself that the amount he has given does produce the desired effect. Almost invariably it is well to give a copious initial enema and when fecal retention is even suspected, 1-3 grain of calomel with podophyllin 1-6 grain and bilein 1-12 grain should be ordered half-hourly till six doses have been taken. The saline laxative should follow every two hours till the intestine is emptied. In some instances an ounce or two of castor oil may prove better than the saline. To obstinately constipated patients give, at body temperature, an enema of epsom-salt solution, containing one teaspoonful of the salt to a pint of water.

It is well to remember always that under ordinary circumstances the patient would not have contracted pneumonia had resistance not been lowered, while autotoxemia was present. Therefore, the physician will "eliminate waste, support vitality, increase resistance and equalize the circulation." Defervescence is easily secured if other systemic conditions are favorable.

Complicating Conditions

Certain definite complicating conditions require the use of appropriate remedies.

Pain, pleuritic in character, is a distinct indication for bryonin. This drug is often required early; then 1-64 grain should be given hourly or with the aconitine.

Should distress in breathing be marked and an irritating cough present, one-sixth grain codeine should be administered every three hours, Later, if expectoration is scant and viscid, apomorphine in small repeated doses acts ideally. Lobeloid may also be used with advantage especially in robust patients requiring a relaxant. Indeed, we are only just beginning to realize the value of this drug; not a few very successful practitioners push it till nausea or marked general relaxation is secured together with profuse diaphoresis. Furthermore, it is claimed that the drug in some manner not yet understood either acts as an "antitoxin" or materially limits the toxin-producing power of the pneumococci themselves. To secure the full systemic effect lobeline sulphate should be given hypodermatically.

Very weak, old or young individuals may be unable to rid themselves of bronchial secretions. Sanguinarin or scillitin will prove the best stimulant expectorants, for these patients. Ammonium carbonate may also be given or vaporized and inhaled.

Nuclein unquestionably must be regarded as a dominant remedy throughout, and if given in full dosage, from the first, will materially modify the infection. It is also peculiarly indicated as a vitalizing reconstructant in the stage of resolution or in improperly treated cases where the lung refuses to clean up and toxemia persists. Personally I would not like to treat the conditions present in pneumococcus infection without nuclein. So convinced am I of its value that some years ago I devised a formula (termed for convenience "nuguaiacal") consisting of nuclein, guaiacol carbonate and calx iodata. For a long time my patients have received this combination regularly, frequently with additional nuclein hypodermatically, and they respond well thereto without exception. The convenience of the combination is apparent.

Calcidin, definitely indicated in the third stage, is also often useful throughout. In fact, if elimination and defervescence are secured this drug, with guaiacol carbonate and nuclein, will meet almost all requirements. The value of iodine and calcium in all pulmonary infections cannot be overestimated.

From the moment the intestine is emptied until the patient is discharged the sulphocarbolates should be employed, the amount to be given depending naturally upon the conditions present. Usually five to ten grains, preferably in solution, three or four times daily, will serve to maintain the desired degree of intestinal cleanliness; but if the stools are foul, or evidences of intestinal fermentation are present, two or even three times that quantity must be given. Should the necessary dose cause gastric irritability a little menthol may be added.

Convalescence

The patient recovering from pneumonia requires tonic reconstructants, and it would be difficult to find a better combination than the arsenates of iron, quinine and strychnine, with nuclein. Cactin should be added unless cardiac conditions are entirely satisfactory—and they rarely are.

In these days, we do not use strychnine as extensively as our predecessors, for the simple reason that we do not permit our patients to reach the condition which demands its exhibition, but we all have to treat individuals who are benefited by it and now and then it is necessary to push the drug boldly. The arsenate is probably the best salt for internal use; the sulphate hypodermically. Cactin and strychnine will be found more effective than strychnine alone. Children seem to respond more readily to brucine.

The Connecticut Maneuvers From a Medical Viewpoint

By RICHARD SLEE, M. D., Swiftwater, Pennsylvania
Lieutenant, Medical Reserve Corps, United States Army

EDITORIAL NOTE.—Last year, Dr. Charles Stuart Moody, of Idaho, told us something about the maneuvers on the Pacific Coast, seen also through the eyes of a civilian physician attached temporarily to our military establishment. This year we are much pleased to give Dr. Slee's intimate sketch of the medical work on the field, as observed in the east.

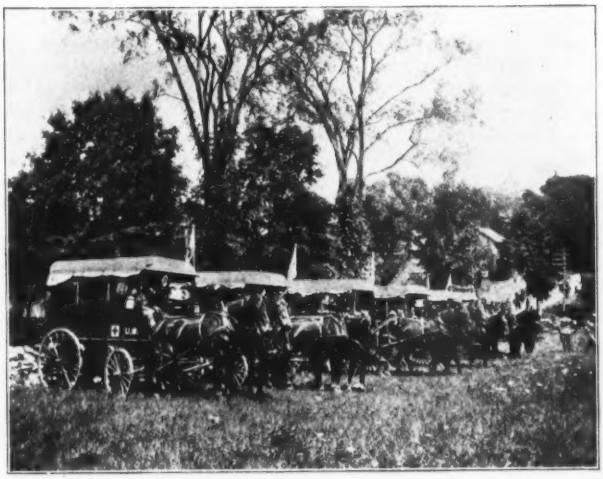
THE Connecticut Maneuvers Campaign held last August in the hilly country of Connecticut, extending from Bridgeport north and along the banks of the Housatonic River, and westward toward New York for many miles, was the most comprehensive problem attempted by the War Department since the Civil War. Over 20,000 men of all arms of the Service, both regulars and militia, were engaged, nearly double the number of those participating in the Texas maneuvers along the Mexican border the year before.

Problems were worked out, so far as possible, on a war basis, and in this brief article it is my intention to discuss only those which especially interest us as medical men. Few physicians who are not in touch with the Medical Department of the United States Army realize the character of the men comprising this corps. Under the efficient direction of Surgeon General George H. Torney and his predecessors, together with the capable cooperation of their immediate assistants, the Army Medical Corps has been brought to a very high state of efficiency. I am certain that there are few men in civil practice who have anything like the broad and thorough training of the medical officer of the United States Army of today.

The work done by members of this corps in the past few years rivals that of any country of the world. It is only necessary to mention the investigations of Reed, Carroll,

Brigadier General Tasker H. Bliss, Commanding Department of the East, Chief Umpire, and Lieutenant W. H Myers, M. R. C., inspecting Third Field Artillery, U. S. A. in action

Lazear, and Agramonte, in the discovery of the cause and prevention of yellow-fever; the work of Maus, Gorgas, Kean, Hoff, Fauntleroy, and others in stamping out yellow-fever, plague, smallpox, cholera, and other diseases from our tropical possessions; that of Ashford in connection with the hookworm disease in Porto Rico; Seyler's investigations on pellagra; the more recent, phenomenal results obtained by Russell in the production of antityphoid vaccine, which has practically eliminated this scourge from consideration when troops are in the field; the work of Chamberlain and his assistants with beriberi; and the near completion of the Panama Canal, which could not have been achieved except for the work of Gorgas and his staff.



Army ambulances parked to the rear of the battlefield

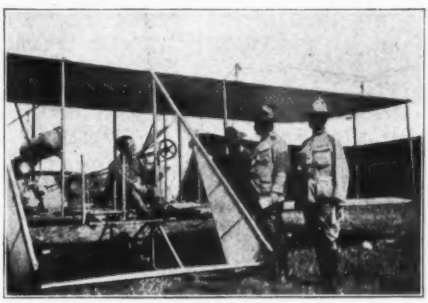
With the knowledge of these facts and of the unusual preparedness of our medical corps, the writer was anxious to observe the workings of the sanitary personnel during the ten days of the recent campaign.

At General Bliss's Headquarters

The headquarters of the chief umpire, Brigadier General Tasker H. Bliss, and his staff were located at Stratford, near Bridgeport, Connecticut. And the camp was a picture. Some forty acres of practically level ground had been selected as the site of the headquarters' camp, and on one side of this plain were the tents of General Bliss and his staff, as were also those of the foreign military observers and visitors. On the opposite side were the headquarters of the New York brigade, together with the camp of the United States Engineer Corps; in addition, details of colored regular cavalry in charge of the corral of mounts for the officers, and infantry companies for guard duty. Here also was stationed the Aviation Corps with three aeroplanes, and the Signal Corps with their field-telegraphs, telephone, and wireless outfits. It was indeed an imposing sight, and one which called forth favorable comment from all visitors.

Headquarters' tent of Brigadier General Tasker H. Bliss, U. S. A., Chief Umpire

To each organization operating in the field were attached regular army officers, both line and medical, for the purpose of instruction and observation. These men were called umpires, and they reported each day to the chief umpire, General Bliss. From this headquarters camp the campaign was directed and the daily observations were conducted,



Colonels Maus and Stephenson interviewing Lieutenant B. D. Foulois, Aviation Corps, U. S. A.

necessitating trips of many miles for the observation of the various units. We spent each day accompanying either Colonel Maus or Colonel Stephenson on their tours of inspection of the opposing forces.

The various organizations composing the Red and the Blue armies were scattered over many miles of hilly territory with roads, good, indifferent, and bad. The camps were selected in advance by the Quartermaster Department, as it was necessary to obtain the consent of the owners before occupying their ground. These were not always advantageously located, but under the circumstances and with a limitation which is not present in actual warfare, the conditions in general were very good.

Camp-Sanitation Under Conditions of War

Considering the deplorable war in European Turkey, with its appalling list of killed and injured and the devastations from cholera, typhus, and other infectious diseases, one naturally asks the question, Are we prepared to face similar conditions should emergency arise?

With the history of past campaigns in mind, strict attention was paid to the sources of water supply and to the disposal of waste, excrement, and so on. However, it was not always possible to obtain a sufficient supply of good water.

Colonel William Stephenson, M. C. and Lieutenant Richard Slee, M. R. C.

One very practical device of the Army Medical Department is the socalled field-incinerator. The use of this incinerator I consider one of the greatest steps in solving problems of camp-sanitation. It is constructed by digging a pit about two feet deep, six or eight feet long, and about five or six feet wide. This pit then is filled in with stones to the level of the ground, and a rough stone wall is laid up on two sides and one end for a height of about two feet above the surface. The excavated soil is then banked up against the outside of the stones. In this impromptu fireplace, a fire of logs is kept burning all the time. Into this the kitchen garbage, tin cans, dish water, and other refuse are deposited at once and consumed, the liquid portions evaporating on the hot stones. The use of this incinerator does away with the necessity for storage in garbage-cans, or the like.

I have had unusual opportunities this year to witness the actual use of these incinerators, during the Connecticut maneuvers as well as more recently, in connection with the camp of the Third United States Field Artillery, which has been engaged in firing problems, a few miles from my home. The absence of flies and disagreeable sights and odors in camps where these incinerators are in use is in marked contrast to the old-time conditions. Destruction by fire of kitchen and camp refuse, burning over the picket lines at frequent intervals, and the oiling and care of latrines are certainly great steps in the preservation of health among the men. The regulations of the Army do not contain any provision for fuel for these incinerators beyond that allowed for usual company purposes. These rules should be changed so as to permit of an ample supply of wood, oil, and straw for the proper policing and care of the sanitary conditions of camps.

It would not do to close a sketch of this kind without criticism, and those which I wish to make are the views of an unofficial observer whose military training has been limited. The various deficiencies which can be mentioned appealed to me strongly as one who has had considerable experience in rural hygiene and sanitation.

The history of recent wars, and especially that which is now engaging the attention of the civilized world in Turkey, seems to foretell that such wars in the future are likely to be short, sharp, and decisive, with an appalling list of killed, wounded, and sick. Our reg-

Third United States Field Artillery, with infantry support, in final day's action

ular troops and many of the organized militia, being now protected from typhoid infection, can safely operate in territories where this condition previously caused continuous anxiety both to the medical department and to the line officers, and which resulted in appalling losses during the Spanish War.

It seemed to me during the campaign under consideration that the most annoying problem, and one which in actual warfare would give rise to the greatest discomfort and difficulty, was the question of transportation for the medical department.

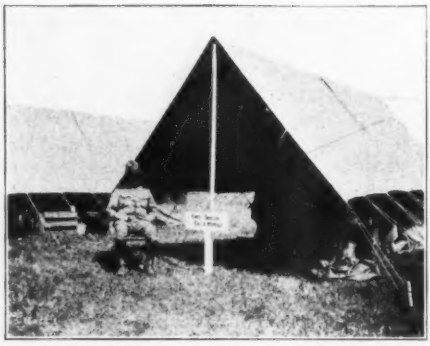
The Defective Transportation Service of Field-Hospitals

The field-hospitals engaged during the Connecticut maneuvers, so far as I was able to judge, were never up with their divisions. Their supply-trains were handicapped by insufficient horses and mules, and it was necessary to double-hitch on practically all of the hills, thus entailing much extra work and delay. During the maneuvers I never saw a field-hospital open. They seemed always on the move and always behind time, with wornout horses and men. This is not a criticism of the medical officers, but of the departments which were responsible for the failure in supplying the necessary teams. The regulations of the army should be amended so that the sanitary department has full control over its transportation. It should be supplied with an appropriate number of animals and drivers, who would be responsible only to the medical officer in command. As it is now, this department really has to take the leavings of the other departments, in many instances. Competent officers of the various branches of the Service have given the closest attention to this subject of transportation, but the fact remains that it is important to move the sanitary personnel and supplies with expediency, and this is seldom done.

All through the line of field equipment, it seems to me, the weight is unnecessarily heavy. Ambulances are unwieldy and bulky, and not suited for rough country; they should always be furnished with four mules or horses. Hospital- and field-chests and the various supplies are not packed as economically and furnished as regards weight as it would be possible to do. The smallest assortment of the necessary drugs, dressings, and instruments directly on the field are worth untold tons, unattainable, at the rear; and the medical officers, be they ever so willing and their corps-men perfectly trained, are handicapped.

Defective Discipline

The sanitary units of the many militia organizations showed a lack of discipline which seriously detracted from their usefulness. In active warfare this would soon be eliminated. In the larger cities, at least, hospital-corps men could be recruited from



Chief Surgeon, Colonel L. M. Maus and his quarters

among the students of the various medical colleges, with great improvement in the personnel of the organizations. It is difficult for many militia men, while in active service during maneuvers, to forget their relative social positions. This does not apply as much to the organizations that are recruited from the higher classes of society, and among the latter I found dis- cipline more constant and more rigidly observed than in those coming from the more humble walks of life.

During this campaign, I saw but one dressing-station established, and only two stretchers with bearers on the field. Orders were issued previous to the engagements for the tagging of a certain number of men in each company who should drop out presumably injured. Proper dressings were to be applied to the presumed injuries as designated on their tags, and they were to be handled, according to regulations—depending on the severity of their injuries—either at the dressing-stations or in hospitals in the rear. But in the excitement of the marches, skirmishes, and battles, these instructions in a majority of instances were overlooked, while many commanding officers wished to keep full ranks and objected to the removal of any of their men.

The loss of this necessary "material," so to speak, seriously interfered with bringing into execution the training of medical officers and hospital-corps men, to which they were entitled. Certainly it detracted from the value of their experiences.

Bands in maneuvers could well be dispensed with. Many of the musicians of the various militia are members of musical unions, engaged to come into the field simply to play their instruments, and they seriously objected to acting as stretcher-bearers during engagements, as required under the regulations. In fact, at times they actually engaged local transportation to carry themselves and their instruments while on the march, and in one instance an ambulance was filled with the instruments of the band.

Another serious defect was the fact that hundreds of men entered this campaign with improperly fitted, and in many instances, new and unbroken shoes. This disabled a great many men and interfered with their active participation in the work. Recent orders of the United States Army require company officers to see that their men are properly fitted with shoes, holding them strictly responsible for this fitting and for the condition of their men's feet. This should be made compulsory in the militia organizations as well.

We must not overlook the fact that to a large number of men engaged in these maneuvers this was their only vacation. They had to sacrifice and willingly forego other pleasures. Nevertheless, the free consumption of soft drinks, beer, pies, cakes, half-ripe fruit, and other indigestible things upset many of the men.

The Lack of Medical Men in Actual War

In case of war there would at once be a great dearth of medical officers. It would be necessary to call large numbers of men from civil practice; and herein lies an inherent weakness in our organization. I care not how well equipped a man may be in civil practice, he must be very adaptable to become a satisfactory medical officer without undergoing many months of serious training.

The duties of a medical officer are not only medical but largely executive. They are

Colonel William Stephenson, M. C., U. S. A., inspecting ambulances on the battlefield, Newton, Conn.

responsible for medical stores, hospitals, the sanitary corps, and the making out of reports covering a very broad field. A man from civil life finds himself tremendously handicapped. There is an idea in this country that it is only necessary to put a uniform on the American, and forthwith he becomes a fine soldier; but nothing is a greater fallacy.

Modern warfare and military problems have become very complex. It takes many months of constant training to produce a soldier, and it likewise requires a considerable period of training to produce a competent medical officer.

The Surgeon General and his staff are keenly alive to this condition and, with commendable foresight, have organized the Medical Reserve Corps of the United States Army, under Act of Congress. The majority of these men are very prominent in civil life. They are commissioned as first lieutenants, by the President, and hold themselves in readiness for active duty should emergency arise. In addition to those on the inactive list, a considerable number of reserve officers are on active duty with troops, supplying a deficiency in the medical corps which has existed for a number of years.

Applicants for appointment in the regular medical corps are commissioned as lieutenants of the reserve corps, until such time as they have received their preliminary training, been graduated from the army medical school in Washington, and prove their adaptability and fitness for their commissions as first lieutenants in the medical corps. Members of the Reserve Corps are kept in touch with the Surgeon General's Department, and receive from time to time such publications as are issued.

No provision, however, has been made, up to this time, for the actual training of the inactive list as army officers. It is to be hoped that in the near future some methods may be devised whereby those on this inactive list may in a measure be prepared to fill their destined positions, should it be necessary to call them to the colors.

Every medical man of military age in civil practice should consider it his patriotic duty to uphold by all means within his power the plans of the War Office, and especially in so far as they pertain to the medical corps, for the maintenance and formation of an efficient and trained reserve. With sufficient backing from the country at large, this can readily be accomplished, and should we be so unfortunate as at any time to be engaged in a mighty struggle, we shall not be held up to the civilized world as an armed mob.

In conclusion, I wish to express my keen appreciation of the attention and courtesies extended to me during the maneuvers by Brigadier General Tasker H. Bliss, United States Army, Commanding Department of East; Colonel L. M. Maus, Chief Surgeon; and Colonel Wm. Stephenson, Chief Sanitary Inspector. These officers, and many others, made it possible for me to receive and acquire knowledge that under no other circumstances could I have obtained, and the lessons therein learned, I am sure, will not soon be forgotten.

Medical Education and Therapeutics

Their Relative Status in Europe and America

By WILLIAM J. ROBINSON, M. D., New York City

Editor of The Critic and Guide and of The American Journal of Urology; Chief of the Department of Genitourinary Diseases and Dermatology, Bronx Hospital and Dispensary; Author of "Sex Problems of Today," "Never-Told Tales," etc.

I TRUST nobody at all familiar with my writings will accuse me of chauvinism, will impute to me racial narrowness, in the slightest degree. It is my boast that I have succeeded in freeing myself from any trace of jingoism or narrow patriotism—and that I can honestly declare that the world is my country and that I judge a man not by his race, nationality, religion or ancestors, but by his character and his achievements.

One of the happiest signs of progress is the saner attitude which the nations are assuming towards one another. The overbearing contempt with which one nation looked down upon the other nation is beginning to disappear. It is beginning to be recognized that, while one member of the family of civilized nations may be inferior to another in some respects, it may be superior in others, and that in the long run things equalize

themselves very well in different parts of the world.

Racial Narrowness

But, of course, chauvinism or jingoism is not entirely dead yet—not even in science, not even in medicine. In spite of our endeavors to make medicine truly international, narrow jealousies are still cropping up; the Germans are still apt to neglect what the French are doing, the French try to minimize the discoveries of the Germans, and most European workers are still apt to neglect what the French are doing, the French try to minimize the discoveries of the Germans, and most European workers are still apt to overlook or disregard American literature and American accomplishments.

I wish to assure my readers that in the remarks that I am about to make there is not a shadow of chauvinism and it is not my intention to extol one country above another. I know the points of superiority of Europe over America, and I know in what respects the United States is superior to Europe. They balance up pretty even. My remarks simply deal with the facts as I know them.

Is medical education in Europe superior to medical education in America? It is so easy to answer "Yes, of course!"—and be done with it. But to answer this question in the affirmative without any qualifications, would not be fair.

Altogether, in discussing the superiority of one medical-education system over another, or of one college over another, we must bear in mind an important point. We must bear in mind that *medicine is both a science and an art*, and that the art of curing or relieving patients does not necessarily depend upon the amount of purely theoretical studies which the student had absorbed in his college years.

Things We Need Not Know

There are many things which it is good to know, which it is interesting to know, but which it is not necessary to know in order to practice medicine successfully. It is good to know Greek so as to know the etymological derivation of the numerous terms that are used in medicine, it is good and interesting to know the biographies of the great leaders of medicine, but a knowledge of these things is not absolutely *necessary* in order to be a competent physician. Let us always differentlate between luxuries and necessities.

Although it may be heresy to say so, I will go even further, and say that the committing to memory of all the various facets and ridges, the origin and insertion of every little muscle, the numerous facts of commercial chemistry, the vast mass of minute details in histology and pathology are not absolutely necessary for the successful practice of medicine. The knowledge concerning Frauenhofer's lines will not help us in curing convulsions in a baby; the knowledge of the process of extracting silver from the ore on a commercial scale (an actual examination question in one of our large eastern medical colleges) will not help us to deal with a breech presentation or puerperal eclampsia; knowing by heart the names of all the bacteria does not in the very least help us to treat an ordinary case of dyspepsia or migraine; and an understanding of agglutinins, precipitins, anaphylaxis, and so on, does not help us in treating pneumonia or pleurisy or heart disease.

I have no hesitation in saying that I have known graduates of some of the foremost colleges here and in Europe who were not as competent to treat the ordinary human ailments and diseases, which constitute ninety percent of our daily practice, as were graduates of more modest and much smaller medical colleges.

The domain of medicine is becoming so large, that it is now impossible for one man to embrace all the ramifications of it. And I prophesy that the time is coming when medicine will be divided into two great divisions—research or scientific medicine, and practical medicine. And upon entering a medical college a man will make up his mind and will declare what division of medicine he wishes to pursue. Up to a certain point the studies will be the same, but beyond that point the studies of the research worker will differ materially from those of the student whose intentions are to become a *practicing* physician or surgeon.

Such division of labor will result in greater benefits both to the science of medicine and the practice of it. Not everybody can be an investigator, a discoverer, but everybody can apply in his practice the results of other people's discoveries.

This rather lengthy, but important, introduction is necessary to a fair appreciation of the remarks that follow.

Europe Leads only in the Theoretical Branches

Medical education in Europe is superior to our education in all theoretical branches; it is not superior in the practical branches. Leaving out of consideration a few worthless and disgraceful colleges—which are rapidly disappearing and which should never have

been permitted to exist—we are turning out graduates who in the *practice* of *medicine* and *surgery* can compare favorably with any European graduate. Our graduates may not be so cultured, their knowledge of Latin and Greek may be meager or nil, but, as stated before, these are the luxuries, the furbelows of medicine, and not the necessities.

In one respect, only is European medical education superior to ours: they have uniformity, which we have not. The Europeans have a certain standard which we do not possess. Throughout the twenty-four units found in Germany, throughout Austria, Hungary, Switzerland, the course is so uniform that graduation in one country is fully recognized by the others; the preliminary entrance requirements are the same, and the curriculum in the colleges is of the same standing. Many German students attend five or six universities before they graduate. They stay half a year or a year in a university, get their full credit, and go further. While, in our country, we have universities ranging from the highest class, like the Johns Hopkins, down to the lowest class, like—well, we will not mention names.

A good deal is made of the length of the medical course in Europe. True, the medical course in most European countries lasts ten semesters, or five years. In some countries it lasts longer, as in Sweden, where the medical course lasts nine years. But I have lived with the European medical students and I assert positively that in the sum total the European medical student spends less time on his medical studies than does the American student.

Class Attendance Not Obligatory in Europe

The greater part of the first two years the European student devotes chiefly to Venus, Bacchus, and Gambrinus, paying but scant attention to Minerva and Aesculapius. Practically no account is kept of the attendance, like in our colleges; there are no quizzes, as we have them; and the student is free to attend or not. Towards the end of the semester he begins to cram—and we know what knowledge acquired by cramming and by quiz compends amounts to. Nor are there regular examinations at the end of each semester.

In short, the European student is kept much less under control than is ours, and unfortunately, with certain exceptions, the student who is not forced to attend regularly will not do it; if he is not forced to be always ready to answer quizzes, he will not be ready. He will study principally before his "exams." And that is just what the European students does. He works particularly hard in his last year or last two years. And when he gets through, while his knowledge of pathology and bacteriology is superior to that of the American student, his knowledge of therapeutics, of practical medicine, is *not*.

With all due regard to the intelligence of certain lay investigators, we must say that a layman is not quite competent to judge of the fitness or unfitness of a medical college. The layman, be he ever so educated, is too apt to think that *fitness* and *bigness* are synonymous; he is too apt to think that big buildings, and marble halls, and big laboratories needs must make good physicians.

We, who know better, know that a small college, in which the professors come in close personal contact with the students, where the instruction is given in small sections, often turns out better and more competent physicians than do the large overcrowded colleges, where the professors and instructors do not know the students and their special needs and where the instruction is cold and impersonal.

Not everything is gold that glitters.

Therapeutics in Europe and America

As to the status of therapeutics in Europe and America, I am glad to be able to state that no comparisons are necessary, for the status of therapeutics is now practically the same in all civilized countries. The wide-awake medical journals at once publish the news of any new therapuetic measure or remedy, and wide-awake physicians in all countries of the civilized world at once begin to apply it in their practice. And even before a remedy is announced to the world, it is experimented with in the various laboratories and hospitals, in Berlin, Vienna, St. Petersburg, Rome, Stockholm, Helsingfors, New York, Bombay, Sidney, Tokio.

The time when a professor would reply to his adjuncts: "*Das ist doch alles eines*" (that is all the same), when they would ask him what to do with a patient; the time when the diagnosis and the autopsy were everything and the cure of the patient nothing, is happily gone, never to return. And the period of German shotgun polypharmacy, of crude herbs, and galenicals is also passing away.

In Germany, as elsewhere, it is being recognized that progress in therapeutics is possible only with definite principles—principles of a definite chemical constitution. Whether the principle is an alkaloid, a glucoside, a neutral principle, an organic or an

inorganic salt, a new synthetic compound, it must be something definite, of constant composition. Otherwise all the results of our experiments are uncertain, vitiated. It does not mean that at the bedside several principles may not be used simultaneously or mixed together. But it does mean that, in order to determine the pharmacologic and therapeutic value of a principle, it must be used by itself and in the pure, isolated state.

And in conclusion I will say, and say it not in any chauvinistic spirit, but deliberately and conscientiously, that in therapeutics, in *practical* medicine and surgery we stand at least just as high as any country in the world, and it is unnecessary and foolish for anybody to go to Europe to be treated for any conceivable disease.

There are as good physicians and surgeons in the United States as there are anywhere in the world.

And, speaking of the branches I am interested in particularly, I will say that I visited practically every important genitourinary and dermatologic clinic in Europe—and I shall do so every summer—and I have noticed that the spirochetæ of Schaudinn do not disappear from the patients' bodies any quicker than they do here, and the gonococcus of Neisser is just as resistant and just as impudent on the shores of the Spree, the Danube and the Seine as it is on the shores of the Hudson or of Lake Michigan.

Occipitoposterior Positions

With a Simple Method for Correcting Them

By WILLIAM RITTENHOUSE, M. D., Chicago, Illinois

EDITORIAL NOTE.—We take pleasure in announcing that this interesting article will be followed by a number of others upon allied topics. Professor Rittenhouse has promised us a series upon the various trouble-making and insomnia-producing obstetrical complications which so often make the life of the general practitioner a burden. Every physician who reads this paper will surely wish to peruse those to follow.

IN looking back over the more than a quarter of a century of my obstetric work, the most vivid impression on my memory is the recollection of the difficulties I encountered and of the anxieties I endured in the first ten years of that work; and now, when comparing notes with many of my fellow practitioners, I am forced to the conclusion that their experience has been, in the main, similar to my own. Constantly do I hear from general practitioners the assertion that they "hate" obstetrics and wish they could practise without doing that kind of work. Twenty years ago my attitude was exactly the same; many a time I went home from a difficult or unsatisfactory case feeling a profound disgust with the whole thing.

This widespread dissatisfaction with obstetrics and obstetrical results is due, in my opinion, to inadequate and impractical teaching. The student leaves college with a confused and undigested mass of information. His memory has been well stuffed with facts, but his judgment has been sadly neglected. Feeling his weakness, the neophyte tries to fortify himself with rules, and, in the ensuing years when confronted with a difficulty, he too often appeals to his memory instead of to his judgment. He is too apt to ask himself, "What was I taught about this?" instead of asking, "What is the common-sense thing to do here?"

Obstetrics, more than any other branch of the medical sciences, has been in bondage to tradition. We have paid too much homage to authority. The man who has had the courage to think for himself has too often been met with the cry of "meddlesome midwifery." As a result, many of our best men have been discouraged from that original thinking and original action which alone can make the practice of any art a source of satisfaction.

These reflections have been largely suggested to my mind by my observation of the management of that obstetric condition which forms the subject of this article, and by my investigation of the teaching (or lack of teaching) of the current textbooks on the subject.

The Troublesome Occipitoposterior Position

More than seventy-five percent of my consultation-practice consists of cases where

occipitoposterior positions have proven too much for the family physician. Finding the delivery unreasonably delayed, he has applied forceps, but failed in his efforts, because delivery was impossible without rotation, and rotation was impossible in the grip of the forceps. And, without casting any reflection upon that long-suffering individual, the family physician, truth compels me to say that I find an appalling number of instances where the position has not been diagnosed; where the mother has reached a dangerous degree of exhaustion from "leaving it to nature"; where she has suffered serious mutilation from unsuccessful attempts at delivery; or where the child's life has been sacrificed by the same attempts. It is not uncommon to find a doctor utterly exhausted from pulling on the forceps, trying to do the impossible; and sometimes a second man has spent his strength in the same hopeless effort.

In most of these cases, if early recognized and corrected, delivery would be comparatively easy, and with the happiest results both to mother and child—to say nothing of the doctor.

Textbook Instruction Is Deficient

In looking over a dozen textbooks to see what they have to offer on this subject, I am driven to the conclusion that the family physician who turns to them for bread will find that most of them offer him only a stone of most indigestible quality. All these books state that the head in an occipitoposterior position should rotate to the symphysis pubis in its descent; but for cases where it fails to do so their recommendations are various and some of them unpractical and even dangerous. A few of the authors make suggestions that are simple enough to be practicable. Some of them almost ignore the subject. Quite a number recommend procedures that would certainly be dangerous in any hands except those of skilled experts, and I doubt whether they would be safe even in theirs.

In all but a very few of these cases of occipitoposterior position delivery can be effected without resorting to measures that are complicated, difficult or dangerous. They can be corrected by means so simple and obvious that they can be employed by the family physician with confidence and safety. What is more obvious, indeed, than the conclusion that, if a faulty position delays or prevents delivery, the logical thing to do is to change the position to a more natural one? And this is the remedy in a nutshell:

When assistance becomes necessary, anesthetize the patient, introduce the hand into the birth-canal, lift the head and rotate the occiput to the front (a half circle always; never a quarter only). Then stop the anesthetic so as to get the benefit of the labor-pains. If these are strong, the delivery may be completed without further help. If not, the forceps may be used at any stage desired.

Those who have not tried this method of early manual rotation often express a fear that it must be very difficult. On the contrary, it is the easiest of all intrauterine manipulations; much easier than reaching up and bringing down the feet in podalic version; much easier than getting down arms that have become extended alongside of the head in a breech-delivery; and, what is more to the point, it is the easiest and safest way of correcting an occipitoposterior position.

Let us now consider the subject systematically and in detail.

Diagnosing an Occipitoposterior Position

The first thing, of course, is to establish an accurate diagnosis, by means of some or all of the following methods:

1. Digital palpation of the sutures and fontanelles.
2. Location of the fetal heart-beat.
3. Manual palpation of the fetus through the abdominal walls.
4. Digital palpation of an ear *per vaginam*.

In addition to these tests, we must not overlook a symptom which, while it is not exactly a means of diagnosis, yet has considerable diagnostic value, inasmuch as its presence should always make us suspect a posterior position.

I refer to the frequently observed fact that in occipitoposterior positions, unless the head is small, there comes a time during the first stage of labor when progress practically ceases, even though the pains continue. This is usually when dilatation of the os is from one-half to three-fourths complete. A considerably larger head can be born without assistance if it lies occipitoanteriorly than if it lies occipitoposteriorly. In fact, only the small heads starting with the occiput behind will spontaneously rotate to the front when they reach the pelvic floor. The large ones will come to a standstill before the first stage is over. Therefore, when this occurs it is proper to suspect a posterior occiput, if the diagnosis has not already been made.

Before any operative procedures are undertaken, the diagnosis must, of course, be ab-

solutely certain; and, of the means mentioned above, all except the last are subject to error. Test number 1 in the list is conclusive if the sutures and fontanelles can be felt; but some heads are so smooth that even the expert is left in doubt. Number 2 is fairly reliable in L. O. A. position, but in the other three positions it is inconclusive. Number 3 is of little value in dealing with very thick abdominal walls or with a tense uterus containing much water. But palpating an ear leaves no doubt whatever and can be done when the patient is anesthetized for the purpose of correcting the position. Or even anesthetizing the patient for purposes of diagnosis is just as legitimate in obstetrics as in surgery.

Having diagnosed an occipitoposterior position, no interference is called for as long long as the case is making reasonable progress. If spontaneous rotation and delivery will take place, so much the better. But, if descent and dilatation have come to a standstill and the patient shows evidence of exhaustion, it is time to interfere. And right here occurs the temptation to the unexperienced to put on the forceps and pull until he is exhausted, in a vain attempt to do the impossible. Delivery is impossible without rotation, and the head cannot rotate in the grasp of the forceps.

How to Correct the Malposition When This Position is Present

After the patient is fully anesthetized, the hand should be introduced into the vagina (slowly, so as not to lacerate the perineum). An exact diagnosis should be made by palpating an ear, so as to ascertain the degree of obliquity. The head should now be lifted up and rotated a half circle, bringing the occiput to the front—that is, an R. O. P. should be converted into an L. O. A., while an L. O. P. should be converted into an R. O. A. I advise the half-circle rotation, because when I have tried rotating only a quarter circle I have found a tendency to spring back to the original position. This is, no doubt, due to the molding of the mother's soft parts.

In grasping the head to rotate it, the operator's fingers should project past it far enough to touch a shoulder, so that the body may be rotated with the head. I find that the body rotates so easily that possibly this precaution may be unnecessary; but I always observe it, for fear that without it the neck might be twisted to a dangerous degree.

Another precaution to be observed is, that, if a loop of the cord or an arm should come down, the prolapsed part should be restored before allowing the head to settle down into the brim.

The position having been converted into an occipitoanterior, the operator may now choose whether he will withdraw the anesthetic and give nature a chance to complete the labor, or whether he will at once apply the forceps and deliver. In deciding this point, it is well to be guided largely by the patient's condition before the anesthetic was given. If the contractions were vigorous and the patient was not unduly exhausted, nature may be given another chance; but as a rule I believe it is wiser to avoid further delay.

I believe the profession is beginning to recognize more and more the unwisdom of permitting extreme exhaustion of the mother if it can be avoided. Undue exhaustion carries with it greater dangers than the slight risks of early assistance.

Other Methods of Procedure

The only other method of treating an occipitoposterior position that seems to me justifiable is to endeavor to secure rotation by repeated readjustment of the forceps. The forceps is adjusted slightly askew; then moderate traction is made, with a twist in the direction in which rotation is desired. When enough rotation is accomplished to bring the instrument straight or a little beyond that, an assistant should crowd the uterus and its contents downward, to prevent losing what we have gained, while the forceps is withdrawn and again applied a little askew. Then the traction and twisting are repeated. Quite a number of readjustments may be necessary to bring the occiput to the front.

Some years ago, before I had learned how easy it is to do the manual rotation described above, I resorted to this method a number of times; sometimes with success, and sometimes with unsatisfactory results, occasionally failing entirely, and often injuring the child because such great force had to be exerted.

One writer advises applying the forceps and twisting the head around until the front of the forceps is toward the mother's sacrum. How he can reconcile such advice with the anatomy of the pelvis is to me incomprehensible. The extreme curvature of the pelvic canal and the corresponding curvature of the forceps blades seem to render such a procedure certain to inflict injury upon the mother.

It has been objected that the introduction of the hand is liable to carry infection, and that, therefore, careless operators might do harm; but the same objection could be made to every form of obstetrical and surgical procedure. I am no more afraid to introduce a clean hand into the uterus than I am to put it into the abdomen in a laparatomy or into any surgical wound. The man who does not properly sterilize his hands is, of course, unfit to do intrauterine manipulations, but he is equally unfit to do obstetrics at all. The world cannot stand still because there are always a few who do not keep step with the march of progress.

Another objection has been raised, to the effect that, if the head were down low in the pelvis, it would be difficult or impossible to lift it up above the brim.

The answer to this is twofold. In the first place, the cases in which the head descends are not the ones in which help is required. As a rule, if the head descends, it will rotate. It is when the head remains high up until the mother is exhausted that we have to offer assistance. In the second place, even when the head had been dragged down low in the pelvis by means of the forceps, in a vain attempt to deliver without rotation, I have always been able to lift it up if the patient was well anesthetized and placed in the Sims position. True impaction is rare.

In a few cases where the occiput had rotated to the hollow of the sacrum, I had a little difficulty in getting the head up above the brim, but patient effort was always successful. In this case a twist must be added to the upward pressure; in other words, the head must be sent back the way it came. Lifting it directly upwards without any rotary movement necessarily would be unsuccessful because of the promontory of the sacrum.

Conclusion

That this subject is one of great importance, is shown by the fact that, according to statistics, about twenty-three percent of all cases are occipitoposterior; in other words, a little more than one case in every five. I am strongly of the opinion that in a large majority of the cases where labor lasts longer than twenty-four hours the cause is an occipitoposterior position.

For a number of years I have employed the method here described on an average of about once a month. It has greatly reduced the average length of labor, the average force required in forceps delivery, and the average of injuries inflicted upon both mother and child. In consequence, I can say that nothing has done so much to make the practice of obstetrics a source of satisfaction to me as has the adoption of manual rotation for occipitoposterior positions.

The Production of Diphtheria Antitoxin

By ARTHUR M. SLEE, Swiftwater, Pennsylvania
Associate Director, Slee Laboratories

EDITORIAL NOTE.—Every physician knows (or should know) when diphtheria antitoxin is indicated, when it should be administered, and how—but how many really understand the process of manufacture of this remarkable remedy? A perusal of Mr. Slee's paper will throw light on the problems which the manufacturer has to overcome and show the difficulties involved in the production of a remedy of uniformly high character—difficulties that are by no means slight.

TODAY, as we all know, the therapeutic value of diphtheria antitoxin is thoroughly established and is now almost universally used in the treatment of diphtheria. Laboratories all over the civilized world turn out millions of doses every year. Yet, in spite of its popularity, I have often been surprised to observe how little is really known about this great remedy except by those actually employed in its production. Because of this fact, I feel that a few words regarding the production of diphtheria antitoxin—which now is a tremendous industry—may prove instructive as well as interesting to many readers of CLINICAL MEDICINE

Diphtheria by no means is a modern disease. Referring to Park's "History" we find that its occurrence can be traced back even to the early Greeks, who were of the opinion that the malady was brought to them from Egypt. From this time on down through the centuries we hear of its ravages in many of the countries of Europe, and it was not long in making its appearance on the

American continent after its discovery. During the latter part of the 18th century there was much discussion as to whether it was identical with croup. The name "diphtheria" was finally applied to it by Bretonneau in 1821. Bretonneau made a very extensive study of the disease, and his clinical observations are exceedingly correct and of great importance.

It was not until 1883, however, that the true cause, the bacillus diphtheriæ, was brought to light by Klebs, who definitely demonstrated its constant occurrence in the throats of those suffering from true diphtheria. This thread was taken up by Loeffler, who, after a year of patient study, isolated the organism in its pure culture and, upon inoculating the mucous membrane of the throats of various susceptible animals, obtained symptoms identical with those of true diphtheria.

Now, surely, any organism which is found only in the throat, and yet produces such marked changes in the heart, liver, spleen, and so on, must in the course of its growth form some extremely toxic by-product. Roux and others finally partially isolated this toxin. Then, in 1892, Behring succeeded in immunizing animals to diphtheria by means of injecting this toxin in increasing amounts. He then proved that the blood-serum of animals or persons thus immunized had the power of neutralizing the toxin, and that, if injected subcutaneously at an early stage of the disease, in a majority of cases it effected a cure. After this brief historical survey we may proceed with our subject.

Why the Serum is Obtained From the Horse

The horse was selected as the animal from which to obtain antitoxin, first, because of its natural immunity to diphtheria, and, secondly by virtue of its size, a relatively large amount of serum may be drawn from it. Unfortunately, the idea that animals utilized for this purpose are subjected to a great deal of pain and suffering seems to be rather prevalent. However, this is an entirely erroneous notion, and is held only by those who know little or nothing of the work. Absolutely the only pain inflicted is the quick thrust of a rather large-sized hypodermic needle, which is not worse than that caused by a sharp cut of the whip or a thrust of the spur.

The animals must, necessarily, receive good care. It is essential that their stables be light, clean, and airy, and their food clean and wholesome. Plenty of fresh water is another great asset in the production of serum. Horses that have free access to fresh, running water, so that they may drink whenever so inclined, seem to remain in better physical condition during the period in which they are under treatment and to produce a better grade of serum. So we see that antitoxin horses receive really better care than the majority of their fellows that are doing ordinary work. Of course, these animals are not called upon to do any work whatever. Needless to say, only strong, absolutely healthy horses are chosen; also, they are always kept under clinical observation for a considerable period before the treatment is begun.

Now, we know that the toxin of the diphtheria bacillus is required to produce the antitoxin, and that it may be obtained only by cultivating this bacillus on a special veal bouillon, where in its development and multiplication it produces the toxin. This is one of the most difficult phases of the work, for conditions must be just right, else the microorganism will not produce its toxin to any great extent.

The broth being placed in Erlenmeyer flasks, giving considerable growing surfaces, it is inoculated with a virulent culture of the bacillus diphtheriæ, and then incubated for a period of a week at a constant temperature of 33° to 34° C. When removed from the incubator, there may be seen a heavy pellicle or membrane over the surface of the culture-medium—the typical growth of the bacillus diphtheriæ. The incubation period ended, the organisms are killed with carbolic acid, whereupon, the toxin produced being filterable, their bodies may be eliminated from the bouillon by filtering through a Berkfeld filter. This carefully filtered bouillon contains the toxin only, and no bacteria whatever.

The strength of this poison is reckoned in M. L. D.'s (minimum lethal dose) for guinea-pigs; one M. L. D. representing the amount necessary to kill one 250-Gram guinea-pig within a period of ninety-six hours. It will be observed that the potency of this toxin is extremely high, very little of it ever being used that does not contain at least 100 M. L. D.'s per cubic centimeter. Toxin employed in the treatment of horses runs anywhere from 300 to 800 M. L. D.'s per Cc. It has even, sometimes, been obtained of the strength of 1000 M. L. D.'s per Cc., but this is rather unusual.

How the Horse Is Immunized

In initiating the immunizing treatment of the horse, a first dose of about 1000 units of diphtheria *anti*-toxin is injected subcutaneously, this being followed by a relatively small

dose of the specific toxin. After several days when the reaction and fever have abated, a still larger dose of toxin is injected; and the treatment is continued in this manner for at least two months. At the end of this period the horse in all probability will be conditioned to produce a considerable amount of antitoxin, although in a large percentage only a very small quantity is yielded; such horses proving utterly worthless for this purpose. A well-adapted horse will show from 300 to 900 units per Cc.

When the animal under treatment shows a sufficient number of units per Cc. to warrant bleeding, its blood is drawn off through a cannula inserted into the jugular vein. By means of a rubber tube attached to the cannula the fluid is conducted into bottles containing a solution of sodium citrate, which prevents clotting. As much as 12 liters at a time may be drawn without weakening a horse to any extent.

The bottles containing the blood are allowed to stand for about twenty-four hours, during which time the red and the white cells and all floating material, because of slightly greater specific gravity, gradually settle to the bottom, leaving the plasma with its contained antitoxic bodies at the top, whence they may be decanted off.

The Refining and Concentrating of the Serum

In the early days of antitoxin therapy the crude plasma, containing all of the irritating and rash-producing properties of horse-serum was injected. A comparatively large volume was required for a dose, as at that time it was not often that a serum containing as high as 500 units per cubic centimeter was procured from a horse. Even at this rate 2 Cc. of fluid often was required for an ordinary immunizing dose, while for a curative dose often as much as 20 Cc. or even more, was necessary. Hence, the injection of antitoxic serum was really nothing less than heroic treatment.

No great improvement was made upon this state of affairs until the year 1904, when Dr. Gibson, of the New York Department of Health, announced his method of concentrating and refining the antitoxic serum by precipitating out the antitoxic globulin. As a result of his experiments, he was able to remove from the serum a large percentage of the non-antitoxic bodies. Hence, the volume being greatly diminished and most of the irritating properties removed, the severity of the injection was greatly reduced. The method of Gibson has since been markedly improved upon by Dr. Banzhaf, of the same laboratories.

Probably the most widely used method of refining and concentrating antitoxic plasma is the following modification of the Gibson method:

The plasma, after having been drawn off from the red and white cells, is heated at a constant temperature of 56° C. for fifteen hours and then diluted with one-third of its volume of water. By means of ammonium sulphate, the globulin, antitoxic and non-antitoxic, is precipitated. On filtering through paper, this precipitate is obtained separately from the albumin and various other soluble constituents. It is then brought into solution again by means of sodium chloride, when the antitoxic globulin may be precipitated with dilute acetic acid. After another filtration, the isolated antitoxic globulin is obtained as a precipitate on the papers.

The filter-papers with this precipitate upon them are placed in a press in pairs, face to face with an intervening layer of absorbing paper between each pair, and the water, with a large percentage of all soluble material, is pressed out. The pressing completed, all salts are removed by dialysis. This antitoxic globulin solution is then brought up to the normal salt constituency of the blood.

After dialysis, the antitoxin is placed on ice for at least two weeks, when it is filtered through paper pulp, to remove whatever insoluble matter it may contain, and then through a Berkfeld clay filter, to eliminate all bacteria. We now have the antitoxic globulin itself, almost entirely free from extraneous matter.

The dread of rashes, serum-sickness, and so on, is gone forever. Nor is this the only improvement, for the volume (now tremendously reduced) is of greatest importance. Where previously 10 Cc. or more was required for a dose of 5000 units, today the physician needs to inject only 2 Cc., or even less; while the danger from ill effects is reduced to practically nothing.

The standard antitoxic unit is that amount which is necessary to neutralize 100 fatal doses of standard toxin.

Carefully standardized toxin and antitoxin are now supplied for test purposes by the Laboratories of the Public Health and Marine Hospital Service in Washington. This method of having standard toxin to test from was conceived by Ehrlich, and it happily assures a uniformity among the products of the various laboratories. The want of some such method of standardization for our bactericidal serums,

such as antimeningococcus or antistreptococcus serum, is keenly felt.

Thus we see that one little dose of antitoxin represents considerable work and expense. At the very least, four months of time is required from the beginning of the treatment of the horse until the finished product is ready for the physician's hands. But, our good layman does not realize all of this, so he protests with great vigor when he has to pay out five or ten dollars to save his child from the inroads of the bacillus diphtheriæ.

The Therapeutic Virtues of Sparteine Sulphate

A True Heart Tonic, a Regulator of Heart Action, a Nonirritating Diuretic Suitable for Administration Hypodermatically as well as by Mouth. No Untoward By- or After-Effects

By GEORGE E. PETTEY, M. D., Memphis, Tennessee

EDITORIAL NOTE.—The following report of the author's clinical study of sparteine was prepared for his work on "The Narcotic-Drug Disease, and Its Treatment" (now in press), but with some slight alterations, is here presented to the readers of CLINICAL MEDICINE, *with the hope that this remedy may fill a vacant place in their armamentarium as it has in that of the author. It is confidently believed that, when the profession becomes fully acquainted with the physiological effects and remedial value of this drug, it will be esteemed by practitioners as one of the few indispensable remedies.*

THERAPEUTIC nihilism, so widespread at present, is largely due to lack of definite knowledge of the effects of remedial agents, coupled with the use of the drugs in the form of galenic and other unreliable preparations. While these factors have been the most fruitful cause of skepticism as to the value of internally administered remedies, at least one exception to that rule exists. I refer to the vegetable drug scoparius, or broom; even when its active principle, the definite, dependable alkaloid sparteine has been employed the results have been more or less disappointing. The reason for this is that it has been given in far too small amounts to produce the therapeutic effects of the remedy.

Sparteine Unappreciated Because Not Given to Effect

In looking up the literature on this subject, the author has found the widest difference of opinion among men of equal standing in the profession and who doubtless are equally accurate in their observation of the effects of remedies. However, in the author's judgment, this difference in their statements as to the action of sparteine may be accounted for by the difference in their views as to the proper dosage of the remedy, and this misconception as to the size of the dose no doubt is the reason why this remedy is not now in general use. It is found that most authors give the dose of sparteine as from 1-5 to 1-3 grain, and the U. S. Pharmacopeia (last edition) puts it as 1-5 of a grain; but the makers of hypodermic tablets have not, until recently, offered tablets of more than 1-10 of a grain, few of them having listed a tablet containing more than 1-30 of a grain.

These are the amounts in which this alkaloid mostly has been tried; and this is why—as already set forth—many practical men, after giving it a trial in this low dosage and not obtaining the desired effects, have rejected it as of no value. Their results would have been otherwise had the dosage been appropriately augmented. The fault was not with the remedy, but with the size and frequency of the dose.

Bartholow and Ringer are the only ones of all the authors examined who state the dosage of sparteine at anything like the proper quantity, they putting it at from 1-2 to 2 grains. It would be more nearly correct to say, 1 1-2 to 2 grains; in fact, 2 grains by the stomach is as small a dose as can be depended upon. Given hypodermatically, 1 1-2 grains is a fairly effective dose; but there is no reason why this should not be 2 grains.

Sparteine is nontoxic when administered in any reasonable amount. It is certain and definite in its action, and, in the author's experience, above all other remedies deserves to be classed as a heart tonic—a heart regulator. It does just what we want done when we administer a heart tonic, without doing those things we do not want.

The Action of Sparteine and Digitalis and Veratrum Compared

It combines the desirable properties of digitalis and veratrum, without their undesirable ones; and, since physicians are so familiar with these two remedies, the author will undertake to compare the effects of sparteine with those of the drugs named.

Digitalis is a true heart tonic so far as its influence upon the heart-muscle itself is concerned; but, while adding tone to that organ, it lessens the frequency and increases the force of its action, it also powerfully contracts the entire arterial capillary system and greatly raises blood pressure, thus increasing the resistance to the onward flow of the blood current. So marked is this, that it not improbably adds to the work of the heart as much as it increases its strength; and, hence, as a heart tonic is almost useless.

Veratrum, on the other hand, reduces the force and frequency of the heart's action and at the same time dilates the arterial capillaries, thus reducing blood pressure and opening up the way for the onward flow of the blood current; but this action is attended by great depression, nausea, and other undesirable effects.

Now, if we could develop the effects of digitalis on the heart-muscle and simultaneously the effects of veratrum on the arterial system, but without any of the other, objectionable, effects of these two remedies, we should have an ideal heart tonic. And in sparteine we have a remedy that does that very thing. It adds to the tone of the heart-muscle as greatly as does digitalis; it also reduces the frequency and increases the force of the heart action. But instead of contracting the arterial capillaries and raising blood pressure, as digitalis does, it has directly the opposite effects. While it does not dilate the arterial capillaries so greatly as veratrum does, it does so to a marked degree, but without any of the unpleasant effects peculiar to the latter drug.

Especially marked are its effects upon the arterial capillaries, in this respect resembling belladonna; however, its influence is not confined to the superficial capillaries, but extends to the deeper capillaries as well. Under its influence the pulse is soft, full, and compressible, instead of hard and unyielding, as from digitalis.

It is prompt in action. Its effects are well established within an hour. Indeed, if given hypodermatically, the effects are quite noticeable within half an hour or less, being in that respect very unlike digitalis; but in point of duration of effect, it is again like digitalis, the effects lasting from six to twelve hours. In fact, it has almost the promptness of strychnine, with the sustained action of digitalis.

As an agent for correcting irregularities of the heart action it should be given first place. It corrects these with great promptness, and its sustained effect makes its frequently repeated administration unnecessary. An initial dose of 2 grains should be given, to be repeated in two or three hours. After that it need not be administered oftener than every four to six hours.

Sparteine is a true and reliable heart tonic, an excellent nonirritating diuretic, and it is entirely free from untoward or objectionable effects.

The Heart-Muscle Is Toned by Sparteine

Sparteine lessens the frequency and increases the force of the heart-beat, but does not raise blood pressure. This is made possible by the fact that it is also a vasodilator, by virtue of which it dilates the arterial capillaries to such a degree as to enable the arterial system to receive and accommodate the increased volume of blood propelled by the more vigorous action of the heart without increasing arterial tension.

It adds tone to the heart-muscles and causes it to propel a larger volume of blood at each impulse, while by its vasodilator action it opens up the way for the passage of this increased volume of blood, thus increasing the propelling force and lessening the resistance. This makes it the ideal heart tonic, and, in the experience of the author, it is the only remedy, or combination of remedies, that meets this indication perfectly. An added advantage is that it is taken up readily from the stomach. Its action on the stomach is that of a bitter tonic. It has no tendency to cause nausea or other unpleasant symptoms.

The Blood Pressure Is Diminished

There has been quite a conflict among writers as to the effect of sparteine on the blood pressure. Some say that it raises the

pressure, others claim that it decreases the same. But this disagreement is quite in conformity with their conflicting statement as to the drug's general effects.

In the literature on the subject the author has found that those who have given sparteine in doses of about 2 grains have been uniformly pleased with its action and have given it the highest praise, both as a heart tonic and a diuretic; while, on the other hand, those administering it in fractions of a grain have condemned it as inert or of little value and made conflicting statements with reference to its effects on blood pressure.

The author recently has made a careful study of this particular phase and is able to present herewith instrumental tests showing uniformly a slight decrease of blood pressure in every instance where as much as 2 grains of the drug was given.

The fall of pressure begins within an hour from the time of taking a dose, and the pressure reaches its minimum about the end of the sixth hour; and this reduced pressure continues for from four to six hours after the lowest point is attained. A uniform fall of from 10 to 15 mm. Hg has been observed in every case thus far observed by the author and not once has there been the slightest degree of rise of blood pressure.

The effect on the pulse was noticeable earlier than the instrument would show the change in blood pressure. A pulse which is small and deficient in volume fills out to a well-rounded pulse in from thirty to sixty minutes after the administration of the full dose of sparteine, and this effect is sustained for several hours. It begins to wane by the end of the fifth or sixth hour; but the blood pressure shows no indication of rising for several hours afterward. The accompanying spygmographic tracings show its regulating action on the heart.

Sometimes the Pulse Is Accelerated

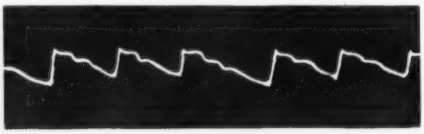
In this connection the author wishes to call attention to an element in the action of sparteine not heretofore noted, and that is, that, while the usual, or ordinary, effect of the remedy is to slow the heart action, in certain conditions it increases the rate. The sphygmographic tracings and pulse records in the first three cases which follow illustrate this phase of its action, as also its properties as a heart tonic.

In the first two cases there was irregular heart action, the irregularity consisting in an extra-prolonged diastole occurring at regular but frequent intervals as if the heart-muscle were tired and was seeking to rest for a fraction of time longer than normal; and then regular contractions would occur again, to be followed in turn by another prolonged diastole—and so on.

In each instance the patient was given 2 grains of sparteine, with the result that a reliable degree of tone was imparted to the heart-muscle, and the time formerly occupied by the prolonged diastole was filled by regular contractions; and this resulted in an increased pulse-rate as well as regular and uniform action. This increase in one case was 4 and in the other 6 beats per minute.

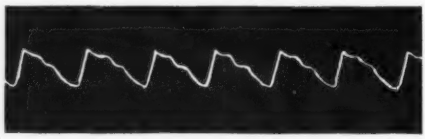
In the third case there was very slow and sluggish heart action, conveying the impression of a tired heart, one that not only needed rest but was seeking to take it. Sparteine in here imparted power and tone to the heart-muscle, filled out the volume of the pulse, and increased its rate from 52 to 74 in the minute.

The author has repeatedly observed this effect, and now does not hesitate to affirm that sparteine has the power to regulate the action of the heart, but that in doing so it also always tends to restore its action to the normal or in the direction of the normal, both as to rate and volume. It imparts a degree of muscular tone which enables the organ to act more normally, and for this reason deserves to be classed as a true heart tonic.



Tracing No.1

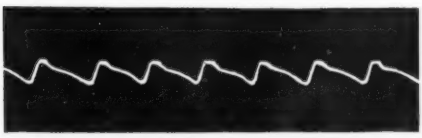
Tracing No. 1 shows patient with a regularly irregular heart action, the irregularity being one full long contraction with two intervening shorter contractions, followed regularly by one long and two short beats. The pulse-rate, 70; blood pressure (systolic), 125.



Tracing No. 2

Tracing No. 2 is from the same patient, two hours later, and two hours after 2 grains of sparteine had been given by mouth.

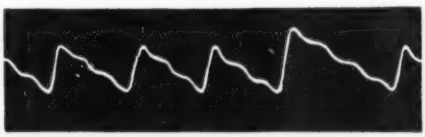
At the time of taking this tracing the pulse-rate was 74, an increase of four beats to the minute; but the blood pressure (systolic) has fallen to 120. It will be observed that the heart action had become perfectly regular and the longer upward stroke of the needle shows increased volume of pulse. Tracing No. 3 was taken seven hours later, and this shows a distinct waning in the effects of the remedy, as indicated by shorter upward strokes of the sphygmographic needle.



Tracing No. 3

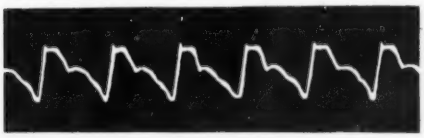
The pulse-rate at the time of taking tracing No. 3 was 76; blood pressure (systolic), 115. While the volume of the pulse had decreased considerably at the time of taking tracing No. 3, the irregularity shown in tracing No. 1 was absent; in fact, this irregularity did not recur to such a degree as to be noticeable until twelve hours from the time of taking tracing No. 1.

Tracing No. 4 is one obtained in a similar case, in which there was a regularly irregular pulse, the irregularity consisting in one long and five intervening shorter beats. The pulse was full and strong, but regularly irregular.



Tracing No. 4

One and one-half hours after 2 grains of sparteine had been given hypodermatically tracing No. 5 was taken. At the time of taking tracing No. 4 the blood pressure (systolic) was 130; pulse-rate, 68. At the time of taking tracing No. 5 the blood pressure (systolic) was 120; pulse-rate, 74.

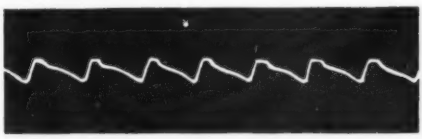


Tracing No. 5

It will be observed that in each of these cases the action of sparteine in correcting the irregularity increased the pulse-rate slightly. This is directly opposite to its effect when there is no irregularity to correct. Where the heart action is weak and the muscle lacking in tone, it imparts strength and tone but decreases the rate. This decrease in rate is usually from 5 to 10 beats per minute; but when the heart action is very rapid and weak, the decrease in rate often is 20 to 40 per minute. When, however, the heart action is abnormally slow and weak, sparteine acts as a regulator both as to volume and frequency. Under these circumstances the added muscular tone brings the heart action up nearer to the normal, even if that be to increase the frequency of its contractions as well as increase the volume of blood propelled by each contraction. This is shown by tracings 6 and 7 in case No. 3, which follows. Here the pulse was abnormally slow and thready, the rate being 52 per minute, and blood pressure (systolic), 125.

Tracing No. 6

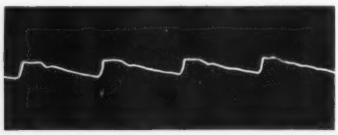
A hypodermatic dose of 2 grains of sparteine was given, and in thirty minutes distinct improvement in the volume of the pulse could be detected. Tracing No. 7 was taken two hours from the time the sparteine was given. At the time of taking this tracing the pulse-rate had increased to 74 and the blood pressure (systolic) had fallen to 120. The difference in the tracing indicates the improvement in the volume.



Tracing No. 7

Six hours after tracing No. 7 was taken, or eight hours from the time the sparteine was given, tracing No. 8 was taken. At this time the effects of the remedy had been partly exhausted, as indicated by the decreased volume of the pulse. The rate also had become slower, it now being 65 per minute; but that the remedy was still exerting considerable influence is shown by comparing tracings No. 6 and No. 8.

While the author's conclusions as to the physiological effects and therapeutic use of sparteine are based solely upon his own clinical study of the remedy, he finds that Dr.

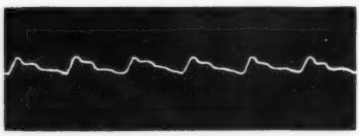


Tracing No. 8. Morphine patient feeling effect of want

Oscar Jennings, of Paris, had preceded him in prosecuting such a study. The conclusions arrived at by the author and Dr. Jennings, each acting independently of and unknown to the other, harmonize to such an extent and so fully sustain each other that the author takes pleasure in quoting passages from Dr. Jennings' work, as follows:

"The deprivation of morphia shows itself by certain symptoms which, as I have said, are natural indications of the treatment required. It should be borne in mind that, when giving up morphia, it is a question of giving up, not a habitual sedative, but principally a stimulant, and a stimulant of such transcendent power that the vital collapse which results from its suppression far exceeds anything that could result from the privation of any other stimulant.

"By gradual reduction and change from the more stimulating hypodermic to the sedative rectal injections, the collapse that would have resulted from sudden hypodermic suppression has been avoided; but, if there was nothing now to be done beyond progressive reduction of the morphia, as is the case outside of my treatment, the final suppression, unless spread over a long time, would still give rise to a great deal of discomfort. Observation, however, shows the suppression of morphia, which amounts practically to the suppression of a fictitious



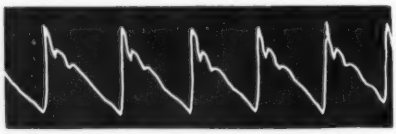
Tracing No. 9. From same patient, with pulse restored by morphine

vital force, gives rise to general functional depressions and metabolic perversions, and these disturbances serve as our guide to treatment.

"The heart is nearly always affected in its functions and the sphymographic tracing shows a sluggishness that is only too eloquent as regards discomfort. This constitutes my first therapeutic indication.

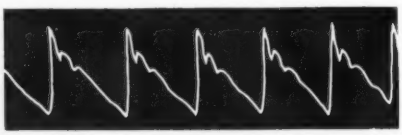
"The preceeding tracing, No. 9, from a former communication to the Academy of Medicine, shows the pulse of a patient who is in want of his dose of morphia.

"Tracings No. 10 and No. 11 are practically identical, but, whilst the first is the effect of a dose of morphia, the second shows the effect of an injection of sparteine.



Tracing No. 10. From same patient, showing the restoration of the pulse, after a state of want, by injection of sparteine

"Heart tonics form, then, my first means of preventing the craving. The first of the three tracings shows a peculiar plateau, caused by the want of cardiac impulsion, together with a resistance to the passage of blood in the vessels. A hypodermic injection given at this time reestablishes the normal state of the circulation, as is shown in the second tracing, taken from the same patient as the first at an interval of a few minutes. It was the study of these tracings that suggested the use of cardiac tonics and



Tracing No. 11

stimulants as substitutes for the morphia; and, in so far as the heart is concerned, the third tracing shows how completely they can replace it.

"As is the case for each of the means of treatment I have proposed, the utility of heart tonics has been endorsed by every subsequent French observer. I shall content myself with one quotation only:

" 'The pulse of the morphia-habitué,' says Dr. Pichon, 'does not afford to the finger any important indication . . . .; but there is a registering apparatus, the sphygmograph, which compensates for this insufficiency as

regards delicacy of touch, and which analyzes the slightest arterial anomalies. It is in this manner that the experiments to which we refer, and which we had the good fortune of witnessing, were made. . . . . These researches were made by Dr. O. Jennings, attached to the laboratory of Professor Ball, upon the numerous morphia-habitués who were attending the clinique at the time. . . . . Before arriving at a definite result, Dr. Jennings took a series of tracings from patients in different stages of morphinism—state of want, state of satisfaction, intermediary condition, normal condition.'

"Dr. Pichon then gives the conclusions of the communication presented by Professor Ball and myself at the Academy of Medicine and adds: '*Nous avons controlé a plusieurs reprises ces savantes recherches. Nous avons pris un tres grand nombre de traces, et nous sommes arrivé aux mêmes resultats.*' He then points out that the sphygmographic examination of the pulse is, as I have always taught, the best way of telling whether a patient is honest or not in carrying out the prescribed reduction. If the plateau is not obtained, when the patient ought to be in a state of want, there need be no hesitation—he takes morphine secretly.

" 'This discovery has been the pivot'; he continues, 'of the physiological treatment, which appears to have given (as we shall see at the end of the chapter) very good results.' After numerous trials, Dr. Jennings found that the sphygmographic tracings, after the use of sparteine and trinitrin, gave the same results as an injection of morphine.

"The problem was solved physiologically and clinically. It (the treatment) often gave before us excellent results. . . . . Most interesting practical consequences result from these physiological discoveries, both as regards diagnosis and treatment.

"Further on, after passing in review the different treatments that have been advocated, Dr. Pichon concludes: 'We should prefer the physiological treatment of Jennings, based upon the action of sparteine and trinitrine. . . . . We have seen that these two therapeutic agents replace absolutely the circulatory action of the morphine-euphoria and overcome the state of want by causing the disappearance of the plateau.' ("Du Morphinisme," Paris: O. Doin. 1890.)

"Further on he confirms the value of sparteine in causing the disappearance of discomforts brought about by depression of the heart. 'According to the patients,' he says (quoting from my communication to the Academy of Sciences), 'this medicine *gives them heart.* The indications of the sphygmographic tracings show how this familiar expression is rigorously exact from the point of view of the physiological action on the heart. Sulphate of sparteine increases the contractile energy of the heart, regularizes its rhythm, acts with great rapidity, and possesses a considerable persistence of action. These are properties that render it extremely precious in the period of abstinence, and make it a *médécine de choix.*' "

[*To be continued.*]

OVER the plains and prairies, over the mountains and seas, over the cities and towns, in palaces, tenements, moving-wagons, dugouts, cottages, hovels, sleeping-cars, autos, day-coach, caboose, cab, in solitary cells behind prison-bars, or wandering out under the stars, my heart goes out to you, O Man, whoever you are, wherever you are, and I wish you well. Only love do I send and a desire to bless and benefit.—Elbert Hubbard.

Paracelsus

An oration delivered at the Amherst College Commencement, June, 1912

By ARTHUR BATES LYON, B. A., Brockton, Massachusetts

FOR the Western World the sixteenth century meant great things. The Renaissance was not yet come; but its approach was heralded by a restless transition period, great in men and achievements. The old order, the heritage of the dark ages, must be consumed with fire, but from its ashes was to arise, Phœnix-like, "a new heaven and a new earth."

Printing had just been discovered. The arts were turning to nature. El Dorado—a golden country discovered by Columbus—what a hope to fire the imagination! Under Luther and Zwingli, Europe was to make its protest against the limitations and hypocrisies of Romanism; under Petrarch and Erasmus, learning and letters were to make vast progress; under Paracelsus, that noble art, the healing of broken bodies, was to establish itself on sound and scientific principles. Ingratitude of the ages! that this man's name should lie half-forgotten; that when the name of Paracelsus comes to us vaguely out of the past it should be coupled with the epithets "charlatan," "impostor," "quack!"

The life of Paracelsus is a strange romance. His earliest intention was to be a physician. From his father, Wilhelm von Hohenheim, a physician of Einsiedeln, he learned his first lesson in healing, the first secrets of nature. Later he studied at Basel; but his ambitious spirit soon longed to be freed from a routine of study with the useless abstractions of which he had no sympathy. But the Abbot Trithemius, rich in knowledge and firm in the love of God, gave a vital impulse to the young life which Paracelsus offered; taught him the divine revelations which the Bible expresses.

Still, the world called Paracelsus with a thousand voices. The university had offered its all, and it was not enough. He must go beyond this. The schoolmen were blinded by the dust of the ages; abstruse and petty theories held them in a paralyzing grasp.

Medicine was in the strong grip of tradition—occult, superstitious, worthless tradition—transcribed by Galen, and sanctioned from immemorial times by the fallacious wisdom of antiquity. True that Roger Bacon had shown the way to truth through scientific research, but the world had rejected him and his doctrines! It is hard to break the crust of custom.

PARACELSUS

He Saw the God in Nature

Yet the lamp of God's truth burned clear in the heart of Paracelsus. And the world must have that truth, in so far as he should be able to give it. He was youthful, but wise. He saw that nature must be man's book. If the divine in his soul showed him a God there to be worshipped, it showed him no less a God in nature that man must ever be seeking. If even the dumb beasts learn from nature, how much more shalt thou learn from it, O man?

So Paracelsus sought God's revelations in many lands. The healing plant the precious ore, yielded to him life-giving virtues. And he studied the nations, likewise—the haughty Spaniard, the quick Frenchman. Italian universities gave him their learning; the hardy British stock taught him new lessons. To the Netherlands, where there was fighting, and where his skill helped to heal many a torn body! To Denmark and Scandinavia, homes of the Teuton sea-rovers! To the southward, back again through the Latin lands, first with one body of itinerant pilgrims and then with another; always with the love of God in his heart; always ministering, healing, learning! To the eastward among the Turks and the Tartars! Magic and astrology he saw to be vain mummeries, but from the mystics of the East he learned anew that God is omnipotent and inscrutable. And like the prophets of old, he reconsecrated himself to the service of humanity—to give life, and that more abundantly.

Paracelsus Teaches Living Medical Truths in a Living Tongue

A great reputation preceded wisdom-seeking Paracelsus to Basel, whither he returned to practise and to teach. He was a veritable ministering angel to the suffering. He began to lecture in the unversity—not in the customary dead language of the past, but in German—speaking living truths in a living tongue. He boldly proclaimed the value of original research; the practical worth of his remedies could be seen by all. The needy student might be sure of a friend in him, and at his house a welcome. His lectures were crowded, his demonstrations eagerly attended.

However, this cup of happiness was not to last. The doctors grew jealous; they knew not of his medicines; to lecture in a modern tongue was unheard of; he wore no crimson robe nor dangled golden chains. They attacked; and he dauntlessly denounced their ignorance and their impostures. The truth was bitter, and it hurt. They turned against him to a man, but he faltered not. Even among his pupils there were Judases. Yet, if his sensitive soul was torn by men's ingratitude, his indomitable will prevailed. Then brute force triumphed over justice, and a prison-cell would have claimed him had he not fled.

His were sovereign remedies, but greater yet was the spirit of Christ in his heart—"Blessed are ye when men shall revile you and persecute you, and say all manner of evil against you falsely, for my sake."

Paracelsus the Wanderer

The restless wanderings began again. "The sick are the doctor's books," he said; and always the sick found relief at his hands. He asked no fees save from those well able to pay. From town to town Paracelsus wandered, often penniless, frequently ragged, always heroically persistent. And always, too, he encountered the enmity of the doctors. His degrees were called in question. Could this man, poor and ragged, be a physician? A doctor, forsooth, should be clad in silks and satins!

Yet, wherever he could find a roof to shelter him for a few months, he would set up his simple apparatus—his forge, his crucibles, his alembics. He worked indefatigably to perfect his knowledge; his diagnoses were careful; his treatment was skilful and thorough. "Rest is better than restlessness," he said, "but restlessness is more profitable."

And now a new force rose up against him. Always a profound student of the scriptures, Paracelsus sought with remarkable knowledge and sympathy to expound them. He favored neither the militant radicalism of the Protestant nor the narrow ecclesiasticism of the Romanist. He stood for the simple teachings of Jesus—love and the brotherhood of man. Yet must the clergy assail him, and with the bitter weapon of intimidation. His scientific attainments had been questioned; now he was proclaimed a heretic and an outcast from the mother church. His friends were warned against him; he was denounced as a rogue, a profligate. Never was man more unjustly branded! Ah! Paracelsus, thou too wert despised and rejected of men!

Paracelsus and His Books

A lesser soul had succumbed before these onslaughts. His books—the children of his brain, his message of emancipation from outworn dogma, the means by which he hoped to point the way of truth to men's minds—he could hardly get published at any cost. The long, hard years were beginning to tell; yet did he trumpet his clear defiance to the unbelieving host. "The theories which you scorn," he told them, "shall one day become your creeds!" And it was so.

Yet Paracelsus was not to see this realization with his eyes. The once tireless energy was beginning to flag. The man who had so generously given himself to others was dying. The utmost skill availed him nothing. He felt the end, but it was God's will, and he was content.

When he died, it was to remember his closest friends; the most of his few possessions to be expended among the poor. The greatest figure in medicine from the sixteenth to the nineteenth century had passed beyond!

The life and death of this great man illustrate his favorite quotation: "I will magnify thee, O Lord, for thou hast set me up, and not made mine enemies to triumph over me. . . Heaviness may endure for a night, but joy cometh in the morning." But that joy for him was upon the other side. The callous world took this man's gifts and repudiated the giver! Yet one day his story shall be set in truth and justice upon the pages of history. A master poet has already seen that great life in clarity:

"If I stoop
Into a dark, tremendous sea of cloud
It is but for a time; I press God's lamp
Close to my breast; its splendor, soon or late,
Will pierce the gloom: I shall emerge one day.
You understand me? I have said enough!"

Some Facts About Rabies

And Its Modern Treatment

By G. E. WITHAM, M. D., Lawrence, Kansas

THE popular word hydrophobia—meaning fear of water—as applied to rabies is a misnomer and should be discarded. A rabid dog has no fear of water. He is intensely thirsty, but he can not drink. The popular mind should be educated as to the nature of this most dreaded disease.

The word rabies means madness, and rabies canina implies dog-madness. It is with this form of the disease that we have most to do, although it is manifested in many other animals, and occasionally in man himself. However, the disease always comes through inoculation with virus from infected animals, usually the dog. The saliva of the animal is the infecting medium that conveys the living microorganism—which is the poison.

Rabies Was Known to the Ancients

Rabies has been known for more than twenty-three hundred years. The first attempt at a full description was made by Celsus eighteen hundred years ago.

The following description of the symptoms in man by one of the ancient writers can scarcely be excelled today:

"In the beginning of the attack anxiety, with no reason for it, irritability and malaise, restless movements, sleep light and disturbed, insomnia, stretching and gaping, and a desire to vomit, and an unusual intoleration and loathing of liquids.

"When the disease is established, there is thirst, and at the same time inability to swallow water. This fear also extends to oily preparations. The pulse is hard and irregular and there may be light fever. There is nervous spasm and trembling. The voice resembles the barking of a dog; breathing is difficult; the face and eyes are congested; pallor and sweating are present; there are frequent eructations. The tongue is protruded; there is hiccough, bilious vomiting, and fear of drink."

Symptoms of Rabies in the Dog

It is important that we recognize the early symptoms of rabies in the dog. The bite of a dog may communicate the disease three or five days prior to the development of active symptoms in the sick dog, making plain the disease. At this stage the animal may be playful and affectionate to an unusual degree; he desires to be recognized and petted. Later, there is a marked change in the voice to a hoarse howl, followed by a bark.

"The rabid dog becomes restless, lying down and getting up again repeatedly. He is easily startled, growls and barks on slight provocation. He may suddenly leave home, wander off miles, and return in a day or two emaciated, wounded and utterly changed. He may have bitten many persons and animals; he may bite and tear himself at the sight of the wound. He does not fight other dogs but bites them and passes on. Convulsions now appear; the hind legs are often paralyzed and the animal may die in a convulsion."

As already stated, the popular idea that a rabid dog has fear of water is a mistake—he is thirsty, but can not drink. In his wanderings he often will swim rivers. Owing to some obscure cases of infections, it has been supposed by some that the disease may originate spontaneously. But it is a fact that in all

cases of infectious diseases the origin comes from infection alone. They never originate *de novo*.

There is no known cure for rabies after it is developed. It is said that in Australia there never has occurrred a case of rabies, nor in New Zealand, and in some other countries it has not been prevalent.

Some People Question the Reality of Rabies

It is a strange fact that there are persons at the present day who disbelieve the reality of rabies! It was my experience, while in charge of an army hospital, to see a case develop in the person of a soldier who had been bitten by a mad dog three months before. I called upon an army surgeon for assistance in the diagnosis of the case. Imagine my astonishment to find him skeptical as to the reality of any such malady as rabies. But my surprise was somewhat modified when I called to mind that I had met with persons who claimed that the world is a flat surface resting upon rocks all the way down! There are persons who disbelieve the reality of what they themselves do not see.

The history of rabies reveals to us in its folk lore a vast amount of ignorance and superstition, but lack of space forbids a recital of those beliefs. The madstone fad has at the present day its advocates and dupes. We are told of cases where it has been applied and no rabies has developed. The apparent virtue of the madstone is explained by the fact that only about fifteen percent of persons bitten by real mad dogs ever develop rabies. In many instances the clothing bitten through rubs off the virus from the teeth.

Madstone or Pasteur Treatment?

Many deaths have resulted by tampering with the madstone and excluding the Pasteur treatment, the only reliable treatment, but which is effectual only during the stage of incubation, which may last from a few days to a year. It is a great mistake to kill a dog that has bitten a person and is suspected of having rabies. The dog should be confined, to see whether the disease really develops. Much anxiety and expense may thus be avoided in some cases.

There is good reason to think that, if wounds from rabid animals can be immediately and properly treated, infection may not occur. The treatment promising the best results is the immediate application of formalin. This is the most penetrating antiseptic agent known, and it may neutralize the poison if applied at once, before absorption has taken place.

Rabies is so rare a disease that many physicians have never seen a case, but witnessing it in man one may be excused for asking the question, "Is nature cruel?"

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[At the Congress on Hygiene and Demography at Washington we were informed by Albert that last year there were more than 4000 cases of rabies in this country, which in this unenviable respect leads all the nations of the world, with the exception of Italy. As Dr. Witham says, Australia has never had the disease, but this is due to the efficiency of its quarantine against animals. The disease can be prevented by enforced muzzling of dogs, and there has not been a single case in England since the muzzling law went into effect in 1902. It is the unmuzzled, unlicensed dog that is the source of danger, and the pet dog, sometimes carried around in the automobile, as related by Cummins, in one case, may serve as the means of transmitting the disease over half a state.

The Pasteur treatment is effective in preventing the development of the disease in persons bitten by rabid dogs. Albert says that the mortality when this treatment is resorted to is only one-half of one percent. This treatment can now be secured by application to many state boards of health, or from the United States Public Health Service. Any physician can doubtless secure the vaccine by writing or telegraphing Surgeon-General Blue at Washington, who will see that it is sent or notify the applicant where it can be pro-cured. The method of making the antirabic vaccine has recently been much improved.

Cummins, of Ann Arbor, speaks highly of cauterization with undiluted formalin, while the New York Board of Health recommends pure nitric acid, which is said to be of value, even up to twenty-four hours. Of course these should not replace the Pasteur treatment.—ED.]

THERAPEUTIC NOTES

CALCIUM SULPHIDE IN ACNE

Frederick H. Dillingham, in an excellent paper on acne (*Merck's Archives*, October, 1912), asserts that deep pustular lesions indicate that the soil is favorable to the growth of the acne organisms. In this case, calcium sulphide, 1-2 grain three times a day, sometimes proves beneficial.

HUMAN SERUM FOR THE CURE OF HEMORRHAGE

Louis A. Levison (*Interstate Medical Journal*, November, 1912) claims that in his hands the efforts to check hemorrhages in children by means of calcium, gelatin, adrenalin, or styptics have been unsatisfactory and the use of animal serum not successful, but that the use of human serum always was followed by good results. Since this latter never produces any toxic effect, it should invariably be employed in all hemorrhages of childhood. Unfortunately, the remedy is not usually very easy to get. Beef or horse serum is much used and can be secured from makers of biologic products.

DIET IN CIRCULATORY DISEASE

The ideal diet or the key to an ideal diet, according to Louis Faugeres Bishop (*Medical Record*, September 28, 1912), for a patient with heart and blood-vessel disease is bread and butter, with a certain amount of milk to supply the fluid, and enough cheese to make up the protein requirements, without an excess of carbohydrates, or heat-units.

BREAD AND BUTTER

Louis Faugeres Bishop (*Medical Record*, September 28, 1912) thinks that, if a man is fed on bread and butter alone, he receives an excess of carbohydrates which burdens his digestion. It leads to an accumulation of weight and other evils; while, when given bread and butter in moderation and enough cheese to furnish the necessary protein, he gets along perfectly well on this balanced ration—which is a very good ration, indeed. Because of the scurvy problem involved it is necessary to add fruits and green things; still, the essential elements may be obtained from cheese, milk, and bread and butter.

CHROMIUM SULPHATE IN GENITO-URINARY TROUBLES

F. W. Schneerer (*Eclect. Med. Journ.*, October, 1912) reports several cases of renal, bladder, and prostatic disturbances in which chromium sulphate, 4 grains every three to eight hours (with much water, to avoid gastric irritation), worked well. It was quite effective in the nocturnal incontinence of urine in children.

THE IMPORTANCE OF DIET IN HEART LESIONS

In an interesting paper in *The Medical Record* for September 28 last, Dr. Louis Faugeres Bishop emphasizes the importance of regulating the diet in purely valvular cases; that is to say, not in advanced cases in which the kidneys have become involved. Many of these patients will, in addition to their chronic heart trouble, suffer from chronic intestinal putrefaction resulting in the chemical poisoning of the heart-muscle, and this will prevent a satisfactory degree of compensation from being developed. If in such cases the diet is carefully regulated, prompt improvement will, as a rule, occur.

THE USE OF VASELINE IN ACNE

In an excellent paper on the etiology and treatment of acne, Dr. F. H. Dillingham (*Merck's Archives*, October, 1912) warns against permitting the substitution of petrolatum for vaseline. The former, according to the author, irritates the skin, and he describes a case where an intense dermatitis followed its application. Vaseline is useful as a base for other remedies, e. g. precipitated sulphur (20 grains to the ounce), but it should not be used in women with a tendency to growth of hair, as it tends to promote this.

In explanation, it might be added that, after all, vaseline is only a proprietary pe-

trolatum, made and sold by the great Standard Oil Company. It is doubtless of superior quality, although the United States Pharmacopeia fixes definite standards of purity for petrolatum, which is official.

THE FOLLY OF CAUTERIZING DOG BITES

Dr. Lesser (*American Journal of Surgery*, August, 1912) calls attention to the folly of cauterizing dog bites, because this treatment entirely fails in the desired object, that is, the prevention of the spread of poison into the general system. On the contrary, cauterization closes the channel of exit and prevents the escape of the virus; in fact, it favors its absorption. A dog bite, or any other bite that is likely to carry infection, should be treated by encouraging free bleeding and then applying a mild antiseptic dressing. If the wound does not bleed freely, suction may be applied.

In contradistinction to this opinion was the advice given at the Congress of Hygiene, at Washington, to apply pure formalin as a cauterizant to wounds made by dogs suspected of being rabid.

ANTITYPHOID VACCINATION THROUGH THE INTESTINE

Courmont and Rochaix (*Muench. Med. Woch.*, 1911, Nos. 49 and 51) succeeded experimentally in immunizing animals against typhoid fever by introducing into the intestines cultures of typhoid bacilli killed at 53° C. The administration by mouth did not give definite results, but the authors had better success with high colonic injections of the cultures to which a small amount of opium had been added. They found that in man three injections of 100 Cc. each of vaccine made at intervals of five days are sufficient.

HYOSCINE IN THE MORPHINE HABIT

In overcoming the morphine-habit, A. Fromme (*Berl. Klin. Woch.*, July 15, 1912) first reduces the dose of morphine to a minimum, then uses hyoscine hydrobromide by injection sufficiently to keep the patient asleep until all the morphine is neutralized and excreted. The duration of the narcosis depends upon the amount of morphine the patient has been taking; it sometimes being advisable to continue the narcosis for seven or eight days. The patient should be kept in a darkened room and on a liquid diet. Morphinists usually tolerate hyoscine very well. Evil after-effects have never been observed by the author.

PHYSOSTIGMINE IN CARDIAC DISORDERS

Dr. Rudolph Kaufmann (noted in *Universal Medical Record*, October, 1912) employed physostigmine in several cases of paroxysmal tachycardia, either alone or in combination with digitalis and strophanthus, and has been much surprised at its efficacy. He gives an interesting detailed report of three of these cases, with pulse tracings, showing the nature of the attacks and the effect of the treatment.

Dr. Kaufmann administered the drug, by mouth, in the form of physostigmine salicylate, in a 1:1000 solution, giving 3 to 10 drops three times a day. The effect of the treatment was to diminish rapidly the frequency and severity of the attacks, till finally, in the course of a week or so, they ceased to occur altogether. He has also tried the drug in small doses in the tachycardia of Basedow's disease, but without any marked effect. So, also, in cases of "arhythmia perpetua" its efficacy was doutbful, but the number of cases observed was small. He ascribes the effect of the drug in these cardiac troubles to stimulation of the vagus nerve-endings.

DIARRHEA OF THE TUBERCULOUS

Barlett and Murphy (*Boston Med. & Surg. Jour.*, Sept. 5, 1912) treat of the exhausting diarrhea so often encountered in the subjects of pulmonary tuberculosis. An extensive study of the feces indicated that, as a rule, these patients were not subjects of intestinal tuberculosis. In treatment, they found that artificially soured milk gave the best results, both as a diet and as a remedy. "Its range of usefulness extends over almost the entire field of gastrointestinal affections encountered in sanatorium work."

Ten years ago, in his work on "Respiratory Diseases," Dr. Waugh called attention to his observation that this diarrhea of the tuberculous was readily controlled by flushing the bowel and disinfecting with calcium sulphocarbolate. The effects were so marked as to indicate the impossibility of the diarrhea being dependent upon tuberculous intestinal ulceration.

As regards the application of the soured milk, the practician should note that, to secure its benefit, he must not employ laxative or antiseptic medication at the same time;

also, that one or two weeks are required to develop the benefits. The good results of calcium sulphocarbolate are manifest within forty-eight hours, but it may well be followed by a course of lactic-acid germ medication.

THE TREATMENT OF BOILS

In *The California Eclectic Medical Journal* for October, 1912, Dr. H. H. Blankmeyer relates his personal experience with boils; and it appears that the Doctor has been suffering from boils ever since childhood, until quite recently he discovered that by a proper intestinal cleaning out (with belladonna, aloes, podophyllin, capsicin, and strychnine) he could keep his condition sufficiently resistant to prevent the boils from forming. Boils that are forming, he has found, can be aborted by the cautious use of carbolic acid, but care is required not to produce a carbolic-acid slough, which heals very slowly.

If the Doctor would carry out and develop the lesson he has learned from his experience and not only would clean out but besides give some internal antiseptics, such as, particularly, calcium sulphide to saturation, he probably would find himself even better off. Boils undoubtedly are due largely to intestinal autointoxication, the immediate cause frequently being errors in diet of one kind or other. In patients subject to boils, a periodical cleaning out with calomel and podophyllin, followed by a saline laxative, and then a course of sodium sulphocarbolate, sodium sulphate, sodium bicarbonate, colchicine, juglandin, and xanthoxylin will prevent the tendency to the formation of boils; while a boil that is forming can be aborted by the same cleaning out with calomel, podophyllin and saline laxative, and then complete saturation with calcium sulphide. The local treatment with carbolic acid has been found by experience to be excellent, but any surplus of the acid should be removed with alcohol.

THYMOL FOR STERILIZING THE OPERATIVE FIELD

Although the application of tincture of iodine for the purpose of disinfecting the skin previous to operation has shown most excellent results, this measure is not as yet the ideal one, and further investigations have been carried on. Thus Hoffmann (*Beitr. z. Klin. Chir.*, 1911, p. 496) published the results of his experiments with the use of thymol-alcohol and his satisfactory experience led Dr. H. P. Kuhn (*Surg., Gynecol., & Obstetr.*, Oct., 1912) to try the method in some 200 consecutive cases. Kuhn modified Hoffmann's technic as follows:

The patient receives a bath the night before the operation. The abdomen, or whatever be the part, is scrubbed with soap and water and dried with a towel. The patient is put to bed with no compress or application of any sort. One hour before the operation the field (scrotum and perineum excepted) is wiped over with a gauze sponge saturated with the solution, care being taken, following Hoffmann's instructions, not to have the sponge too moist or to allow the solution to remain in any depressions.

There occurs, at this time, a sensation of warmth accompanied by a mild degree of hyperemia. No patient has ever complained of burning or discomfort, nor has the author observed the slightest degree of dermatitis following. After the application has dried, which occurs in a few moments, a large sterile gauze pad is applied and retained with a binder. The second application takes place on the operating table, the same precautions being followed as for the first. The operation begins five minutes after the last application. In emergency cases the solution has been used immediately after the scrubbing or without preliminary scrubbing, with good results.

The author found this method efficient in the preparation of the skin in any locality, over abrasions, compound fractures, and infections; but it should not be used on the scrotum or the perineum, as here it is as likely to produce a dermatitis as is any alcoholic solution.

To get the best results, Hoffmann's rules should be followed: (1) Allow at least five minutes after the applications before operating. (2) Do not use an excess of solution or flush the parts. (3) Do not allow the pertioneum to come in contact with the solution or with the skin disinfected with the solution.

HYPERTENSION DUE TO AUTO-INTOXICATION

In *The Providence Medical Journal* for September, 1912, Dr. W. F. Barry presents a very interesting study on hypertension, a problem he has carefully investigated for a number of years. The doctor agrees with Dr. Snow, of New York, that conditions within the alimentary canal have more to do with the establishment of hypertension than other affections. While over indulgence and

excessive eating, particularly of foods rich in protein, such as meat, are objectionable, it cannot be stated that carbohydrates in connection with excessive feeding do not also play a role in the autointoxication process.

With regard to the treatment of hypertension, Dr. Barry does not believe there is any drug that has any permanent effect in reducing this condition. Furthermore, he has found the iodides useless, while the nitrites are merely of temporary value, and should be used only in crises of the disease, lest the organism become accustomed to them.

Although drug treatment promises little, if any, curative effect, symptomatic treatment is of great importance, and will open the way for a definite curative treatment, which will thereby be made easier.

For the headache of hypertension, the author gives the bromides: for insomnia, veronal. In irritable, pounding heart, he has seen good results from strontium bromide, with 2 or 3 drops of tincture of aconite [aconitine, the alkaloid—Ed.]. For the dizziness, nothing will give better results, in the author's opinion, than the bromides; the potassium or sodium salt being recommended in doses of not less than 15 grains three times a day. For weakening of the heart-muscles, digitalis often works wonders, and, although digitalis physiologically raises blood pressure in a normal subject, it has been found by careful observation not to have the effect of increasing the pressure in arteriosclerosis or in chronic myocardial disease.

Of considerable value in the treatment of hypertension is electricity, which, according to Dr. Barry, surpasses in efficacy the employment of any drug medication or baths, for by it it is possible to lower arterial tension to a considerable extent and to maintain it at an entirely safe rate.

The most important part in the management of cases of hypertension is attention to the dietetic and hygienic regimen. Many cases of hypertension in fact are found among those fond of the good things of life, and not only excessive meat eating is a cause, but also excessive eating in any way. Patients with hypertension should take only the least possible amount of food compatible with health. Meat should be eliminated as far as possible, a low diet being sought and kept up indefinitely.

Dr. Barry closes his very interesting and valuable paper by warning against dizziness. He says: Beware of dizziness! Don't pass it up labeled as liver disease! Look for the cause, and very many times it will be hypertension. Keep accurate records of these cases for comparison, for in no other way can you tell of the progress of the condition. Study every case that comes to your hands for hypertension, and you will be repaid a hundred fold."

TREATMENT OF HEPATIC COLIC

A late issue of *Le Journal de Médécine et de Chirurgie* treats of the hepatic paroxysm and its management. The problem is, to control the pain without having recourse to medicaments so energetic as to induce organic reactions. If the stomach will bear it, Robin's potion is advised: Potassium bromide, 0.6; morphine hydrochloride, 0.05; extract of belladonna, 0.05; syrup of ether, 30.0; cherry-laurel water, 10.0; hydrolat [distilled water] of valerian, 110.0. A soupspoonful every half hour for three or four doses is to be taken.

Or this: Syrup of chloral, 30.0; glycerin, 30.0; saturated chloroform water, 50.0; distilled water of linden-blossoms, 50.0. A soupspoonful every quarter hour to be taken till cessation of the crisis.

Another, by Pouchet: Amyl valerate, 0.60; oil of sweet almonds, 8.0; acacia, 5.0; syrup of orange, 30.0; distilled water, 60.0. Take at once in a half glass of water or milk.

Locally, make hot applications, and add this liniment: Baume tranquille, 40.0; extract of opium, 2.0; extract of belladonna, 2.0; extract of hyoscyamus, 2.0; chloroform, 10.0.

Or: Menthol, 1.0; chloroform, 10.0; methyl salicylate, 10.0; camphorated oil, 100.0 (Hirtz). Apply at night to the hepatic region and cover with flannel.

Gilbert counseled recourse to enemas: analgesin, 1-2 Gram. Dissolve in 150 Grams of water. Add laudanum, a few minims, and use as enema. Repeat in two hours if the pain has not subsided.

A suppository may also be administered every hour: Extract of belladonna, 0.02; extract of opium, 0.02; cacao butter, 2.0. For one suppository. Do not exceed five in the twenty-four hours.

It is usually preferable to resort to the subcutaneous injection of morphine. But one should know that the large dose of 1 centigram may be dangerous, and there have been fatal results from this massive dosage. Much better works the combination of: Morphine sulphate, 0.01; hyoscine hydrobromide, 0.0005; cactin, 0.001. To this we suggest adding sparteine sulphate, 9.0.

GLEANINGS from FOREIGN FIELDS

TRANSLATED BY E. M. EPSTEIN, M. D.

Dyspepsia or Gastritis and Its Successful Treatment

CHRONIC gastritis, which not so long ago was described under the term of "dyspepsia," is an affection for which the physician is consulted almost every day. Moreover, it is one of those ailments which requires much sagacity to manage, for under this common name and its seeming simpleness it may hide far graver conditions.

It is not the intention to write here a differential diagnosis of various diseases which may borrow more or less of the symptomatology of dyspepsia or of ordinary gastralgia. We shall limit ourselves to calling to mind those symptoms which, according to Prof. Jaccoud, are the principal ones, so that we may arrive rapidly at one of those capital indications for treatment which, instituted in time, may be sufficient to put things in good order again.

Chronic catarrh, unless it follows upon an acute one, comes on slowly, and is difficult to diagnose because it is apyretic. For a long time, in fact, all the symptomatology of chronic catarrh consists in some local phenomena and digestive disturbance. It is possible that perturbations in the operations on the stomach find an echo in the general nutrition and in the functions of other apparatus. But these secondary effects are always tardy, and, in the case of catarrh, it is, strictly speaking, more of an indisposition than a disease. The individuals affected are not bed-ridden, nor are they hindered in their common habits of life or in their habitual occupations.

When the stomach is empty its sensibility may be normal, but its digestion of food determines a feeling of fulness, of painful pressure, and more rarely of veritable pain. This pain manifests itself on pressure as well as during digestion, but in either case it is dull, and, in a word, it is tolerable.

With the uneasiness or pain that follows a repast there is for two, three, four and even more hours an elevation more or less of the epigastric region, according to the time it takes to digest the food taken into the stomach; then this temperature elevation disappears little by little as the food passes into the duodenum. This epigastric distention is the result of the formation of abnormal gas which comes from the decomposition of the ingesta in acute and in chronic catarrh. The latter we have seen provoked by a lack of acidity in the gastric juice, and by the mucus, which acts as a ferment.

At the outset of the sickness it may not be likely that the distention had any other than the cause mentioned, but when the distention has lasted some time it will be necessary to take into account the law of Stokes respecting the irritated submucous muscles, and we may be justified in attributing the slowness of the abatement of the distention to an insufficient muscular action by a too prolonged stay of the material in the stomach.

What is certain is, that the longer the food stays in the stomach, the more complete the decomposition of it becomes and the more considerable becomes the accumulation of the resulting gas. Thus we have the elements of a vicious circle established, for the gaseous distention, when great, has the effect of mechanically hindering the muscular action.

Even when the symptoms are not very pronounced the patient after a meal is constrained to loosen his garments, for if he does not do it the enlarging of the stomach upward pushes the diaphragm before itself, and then cardiac palpitation ensues at once, this lasting as long as stomachal digestion goes on, while the cause of this heart trouble may easily be misunderstood.

Although precaution may be taken to loosen all bands, the patient is dull, out of spirits, feels sore in his bones, tired, yawns repeatedly, and at last there come eructations, which bring often some small portion of the stomach-contents up into the mouth. These regurgitations, always very disagreeable to the taste, are either insipid or bitter, or, owing to the presence of a recent formation of certain acids in the stomach, what is belched up may have irritant properties that provoke a real burning sensation in passing the pharynx—which is known as pyrosis.

When once the digestion of the meal is done, kindly or otherwise, matters return into good order again provided there is no intestinal complication, there only remaining a sense of a passing fatigue.

This paroxysm, which recurs with every period of digestion, is at times deceptive in character. There is gastric distention and pressure, but there are certain dominant phenomena: cephalic congestion, the face is red and puffy; there is headache, also a *quasi* irresistible tendency to sleep; the respiration is more slow and sighing; the heart beats more frequently, while it beats more heavily and strongly against the chest. Some individuals have really a little fever at the same time. These symptoms, which may be ascribed in part to the mechanical distention of the stomach and in part also to an excitement of a centripetal action of the pneumogastric nerves, subside as the digestion progresses; but when they have once made their appearance they are sure to recur again at every repast, though somewhat less pronounced when the meal is lighter.

Vomiting is not a constant symptom, and vomiting of food immediately after a meal or one or two hours after, owing to an insufficient action of the gastric juice on nitrogenous matters, is the rarest symptom of all. In this respect this catarrh differs from all other chronic gastric maladies. The matter vomited is mixed with an abundance of mucus, and it may be more or less modified in character. This is owing to the abnormal presence of butyric acid, to a disagreeable penetrating taste and odor; while at times, but more rarely than in cancer, the vomitus contains, in addition, the microscopical fungi known as sarcina.

Vomiting without casting up ingested food is more frequent. The ejecta sometimes are viscous and coherent, disposed in long strings, or they may consist of an abundance of a watery transparent uncolored or slightly yellow-tinged liquid.

The appetite is always diminished and hardly has the patient begun to eat when he feels that he has enough. Frequently, too, the memory of what he has to endure during digestion causes the patient to abstain from all substantial food. In other cases there is a veritable disgust, to such a degree that the mere thought of viands provokes nausea.

The tongue may be clean, but more frequently it is coated as in buccal catarrh. The tongue is enlarged, patulous, the papillæ seem large, and the patient complains, especially in the morning, of a changing taste in the mouth.

The functions of the intestines are necessarily disturbed, but these disturbances are of different kinds and changes occur rapidly. The trouble may be an obstinate constipation with flatulence as a result of inertia of the intestinal muscles; or there may come on a diarrhea, provoked by the irritation from the arrival of materials by the stomach ill-elaborated; or, again, more simply, by a prolonged accumulation of feces—a diarrhea which actually is salutary in this case as a welcome unloading.

Thus, therefore, there are a sensation of fulness, sensitiveness of the stomach, flatulence, yawning, eructations, regurgitations, vomiting, anorexia, a "gritty" condition of the tongue, and all that results from these—in brief, the physiognomy of dyspepsia, or chronic gastritis.

Now, those of our readers who have followed us with attention must have already become aware that all these divers symptoms indicate clearly the use of quassin in the treatment of this state. We do not mean to say that this remedy alone will always suffice, but we are certain that judiciously employed, with or without adjuvants, according to circumstances, quassin will always be of the greatest usefulness.

Quassin contributes to the active functions of digestion as well in its primary phases of absorption—assimilation—as in its secondary phases, that of evacuation. Its primary action, which is very appreciable on the muscular fiber of the digestive tube, also augments its normal secretions secondarily and at the same time increases the muscular tonicity.

Quassin does not act directly on the assimilation, but indirectly by stimulating the appetite, and the digestion, augmenting by this action the quantity of ingested elements and improving the nutrition, which gains both by the quantity of the elements brought in and by the quality of the absorbing action.

The immediate effect of quassin is to increase the salivary secretion, and this saliva, although so hypersecreted, retains its normal composition. This effect is followed soon by an imperious demand for something to eat, which it will be well to satisfy if you wish to avoid the sensation of pain in the stomach, with acid regurgitations, or even with a sensation of fainting, if you are tardy in satisfying this demand.

From the first day of employing quassin you may notice an evident increase of the appetite, followed by a marked rise of strength consequent upon a more copious feeding and a better digestion of what was ingested.

Quassin, has, therefore, its indication in most diseases characterized by a more or less complete loss of the appetite and in those diseases which are consequent upon a defective or insufficient alimentation. Quassin will prove useful in various forms of anemia, of chloranemia, not, indeed, in the sense of a direct healing, but because it stimulates the appetite and facilitates digestion. In atonic dyspepsia, in vertigo caused by stomach ailments, and in general debility quassin will act equally as a stimulant of the appetite and as an arouser of the digestive functions of the stomach, both by its action on the gastric juice and its action on the muscular fibers of this organ, the tonicity of which it arouses.

That same action on the muscular fibers makes quassin available with success in vomiting from purely nervous causes.

Borborygmi are disagreeable, always embarrassing manifestations, and if due to digestive difficulties are efficaciously combated by quassin—always provided that the borborygmi do not arise from a too tight corset.

On the evacuations quassin acts in twofold manner. In cases of constipation it makes the discharges semisolid, molded; while in cases of diarrhea connected with a bad state of the digestive functions it stops the diarrhea by improving the digestion, just as it stops the constipation by arousing the contractility of the intestinal muscular fibers and increasing the intestinal secretions.

The indications for quassin are many and go beyond the digestive canal merely on account of the action which it exercises on the nutrition on the one hand and, on the other hand, on account of its action on the muscular contractility of the splanchnic organs. In the last category we would mention icterus from retention of bile, hepatic and nephritic colic, and cystitis, while among ailments depending upon malnutrition and in which quassin is indicated we mention chlorosis, anemia, adynamia generally and especially the adynamia of a long and difficult convalescence. But among all affections it is dyspepsia and anorexia where quassin will be found to serve well.

Lastly we must not forget to mention in this connection that quassin is useful to maintain or to increase the lacteal secretions which result from an improved nutrition and, it may be also, by a special action of quassin on the mammary gland.

Only the crystalline form of quassin should be employed, and be given in doses of 2 milligrams repeated five or six times a day, two granules before each repast.

The crystalline quassin only is recommended, because in the amorphous form it is associated in variable proportions with other, inert, substances which diminish its power appreciably so that the active substance can not be prescribed with precision. This accusation we make against most of the amorphous alkaloids.

Quassin must always be prescribed in the form of granules to the exclusion of all other forms, on account of its intense bitterness when administered in any liquid form.—*Revue Therapeutique des Alcaloides*, July, 1912.

LEAD POISONING FROM TOBACCO SNUFF

Stadler, of Gais, Switzerland, reports the following case: A woman, aged 33 years, came under treatment for bilateral inflammation of the optic nerves and incomplete paralysis of both the abducentes (6th cerebral). The gingivæ had a line of bluish-gray on both maxillas. The diagnosis of chronic lead poisoning was made. Her condition became improved and she withdrew from treatment and examinations.

Three months later the woman was brought to the hospital in an unconscious state. This time the diagnosis was made of cerebral disease, and of inflammation of the optic nerves and of the abducentes in consequence of lead poisoning. Five days later the woman died. The postmortem confirmed the diagnosis, but from what source this lead poison came was not clear. Her husband and children showed no phenomena of such poisoning, and an occupational disease of that kind was not to be thought of, as she worked only at housekeeping.

Accidentally it came out that the woman four years ago became a great tobacco snuffer. She was in the habit of snuffing directly from the package, took pinch after

pinch without control and in doing so comminuted the metallic foil of the package, which mixed with the snuff and became snuffed up unnoticed in the dark. In some untouched places the foil was corroded, thin and brittle.

As it was to be assumed that certain chemical qualities of the quite moist tobacco dissolved the foil which could pass over into the snuff and transmit lead to it, a number of packages were procured from the place where the woman got her snuff and submitted to a chemical examination. The result was that the foil was found to contain 89.9 percent of lead, and the tobacco of the different packages contained variously 1.75 and 1.9 percent of lead. The leadfoil of all the different packages was strongly attacked and in places very thin and brittle. The tobacco of the various packages examined reacted alkaline.

Inquiry established the fact that the woman consumed 37 ounces on the average per month, or 150 grains a day, corresponding to 8 drams of lead.

According to A. Lange ("Ueber die Beziehungen der Technischen und Gewerblichen Gifte zum Nerven System") the ingestion of 8 to 10 milligrams of lead every day leads to chronic poisoning. It is not to be assumed that the woman absorbed 175 milligrams lead daily, because a great part of the tobacco is lost in snuffing. But considering the quantities she snuffed up daily she certainly must have absorbed enough lead to poison her.—*Correspondenz-Blatt f. Schweizer Aerzte*, 1912, No. 5.

SAUERKRAUT FOR PINWORMS

The water obtained by boiling sauerkraut in water, is recommended for children to drink, several tablespoonfuls during the day, as a cure for pinworms. It has the effect of removing the pinworms with the evacuations. Of main importance, however, is to cleanse the parts about the anus after every passage, to guard against any stray parasite, and to anoint the parts with gray ointment or with a nitrate of silver salve, for the purpose of killing them off effectually.—*Pharmaz. Zentralhalle*, 1912, p. 820.

FIBROLYSIN IN ATROPHIC LUNG CONTRACTION

In cases of pleurisy and pneumonia where, after the inflammatory stage has passed, a gradual contraction of the affected places begins to develop, there has been, in the recent past, little to do or to expect either for physician or for patient. Recently the use of fibrolysin has given hopes of betterment and even of cure. A full dose of fibrolysin (0.2 centigram thiosinamin) in sterile solution is injected subcutaneously or better into a muscle, or, in urgent cases, directly into the blood current, once daily or every second or third day. In children the dose should not be less than half the above. It may also be employed in the form of plaster, to be absorbed. Fibrolysin suppositories are useful for administering the remedy to children instead of hypodermically. Internally administered fibrolysin seems to be least effective.

Its pharmacodynamic power consists in preventing the shrinking of cicatricial tissue, a and in loosening already formed cicatrices and bringing about gradually their involution. At the same time there takes place an as yet unaccountable general improvement of the health of the patient.

According to this, there is an explanation of the extremely favorable result of the case of Drs. Rothschield and Krusinger, confirmed by Dr. Stoelzner. The case was that of a 7-year-old boy whose right lung was shrinking after pneumonia, and which already had advanced to a curvature of the spine. The boy received, in the course of three weeks, ten full doses of fibrolysin, injected between his shoulders hypodermically. After one month the boy increased in weight 10 2-3 pounds, became free from feverishness, while shrinking and spine curvature no longer could be seen.—*Deutsche Med. Wochenschr.*, 1912, No. 6.

GLYCASIN

Glycasin is a salve consisting of stearic acid, alkali and glycerin, being of soft consistency, neutral, nonirritating, sterile, and yielding a turbid solution in water. Glycasin is preferable to the lubricating preparations consisting of glycerin and a little tragacanth, because it adheres well to the instruments, while it is preferable to those in which much tragacanth is used because it glides and smears better. It deserves preference over fatty preparations, because it does not hinder the effect of medicinal solutions after the instrument anointed with it have been introduced, or makes their application difficult.—*Pharmazeutische Zentralhalle*, 1912, p. 704, quoted from bulletin of Beiersdorf & Co.

MISCELLANEOUS ARTICLES

Frank Seaver Billings: A Tribute to a Great Scientist

THERE died at Sharon, Massachusetts, October 14, 1912, a man who only a few years ago startled the world by the announcement that he had discovered the germs of that much dreaded disease called swine-plague.

Frank Seaver Billings was born January 15, 1845, in Boston, Massachusetts. At the age of twelve he entered the Allen School in West Newton, his home state, where he studied five years. Because it was feared that he had inherited tuberculosis, his father sent him to sea in one of the several vessels which he owned. The young man followed the sea for eight years, but in 1870 went west to Michigan and worked on a stock-farm, where he remained three years, afterwards going back to his home in Boston. On November 6, 1873, he married Harriet Matilda Roulstone, and a son was born to them October 7, 1874. In the summer of 1875 he entered the Royal Veterinary Institute of Berlin, from which institution he took his degree. It was his good fortune at this time to study pathology under the late Professor Virchow. While in Berlin he met with a great sorrow in the loss of his son, who died January 4, 1879. After this bereavement Dr. and Mrs. Billings returned to Boston. On October 20, 1881, they were blessed by the birth of a daughter, Frieda G.

Dr. Billings practised his profession in Roxbury, Massachusetts, until 1883, when he again went to Germany to study bacteriology under Koch. He returned to America in 1885 and took a position in the New York Polyclinic. On the 12th of December of that same year he sailed again for Europe for the purpose of placing in the Pasteur Institute for treatment four boys who had been bitten by mad dogs. The results of this trip were successful. While at the Polyclinic in New York he received a call from the state of Nebraska and he entered the service of that state as pathologist and bacteriologist at the University at Lincoln.

In 1888 he went to Chicago and engaged in business with Mr. George Seavers for the manufacture of a virus, which Dr. Billings had discovered, for the prevention of hog-cholera. Owing to the opposition of government officials, however, the venture was not a success. In 1890 he went back to Nebraska, where he remained until 1893, when he resigned his position and returned to the East. Making his home first in Grafton and later in Sharon, both towns of his native state, he continued his scientific studies and research until his death. During his residence in Grafton, in 1895, he was the means of saving many thousands of dollars to the farmers of Massachusetts by his testimony on the question of tuberculosis in cattle.

The following words are a part of the tribute paid him by one writing to a local newspaper at the time of his death: "In Germany he had taken special work under the great pathologist, Rudolph Virchow, and was eminently fitted for the work in Nebraska to which he was called, and there he is credited with having been one of the first to get on the track of the antitoxin method of treating germ-diseases, which has since become so popular and so successful. He did much good work for the state in the study of animal diseases, and several valuable books from his hand were published by the University."

The most of us want some credit for the good we try to do in this world and when we are misunderstood and our motives maligned we are apt to be somewhat discouraged and embittered. Dr. Billings was no exception to the rule. He would have been more than human if he had been.

He still continued his studies, reading omniverously all the new books on biology and the kindred sciences, and I wish to bear witness that it was a great privilege to be admitted to the treasures of his mind.

Dr. Billings had received many honors. In addition to receiving his degree from the

Royal Veterinary College of Berlin, he was a member of the Royal Veterinary Association of the Province of Brandenburg; honorary member of the Veterinary Society of Montreal, Canada; member of the American Medical Association; member of the Gynæcological Society of Boston; honorary member of the Alumni Association of the Medico-Chirurgical College of Philadelphia; member of the Chicago Academy of Medicine; and a lecturer before the Chicago Veterinary College.

Dr. Billings was a man of tremendous energy, with a mind that sought truth for truth's sake. He was careful in his statements and never expressed an opinion on any scientific subject without having first considered it from every viewpoint. His writings were always based upon careful and original research. He did splendid work among the herds of cattle in Nebraska and taught the farmers how to protect their cattle from contagious diseases. His preliminary labors in conquering the swine-plague were extensive, covering a broad field, and have been used by his successors with good results. These researches have been modified by later experiments, until at the present time the inoculation treatment has been used without fear by western swine-breeders. The views first promulgated by Dr. Billings have been introduced as a stepping-stone in the treatment of nearly all animal diseases so far discovered.

As a lecturer, Dr. Billings was positive, basing his ideas upon his researches, thus giving all his addresses weight and interest. Many teachers are able to impress the thoughts which they have learned from their teachers or their books, but the teacher who can give from his own experience, observation and research is able to go further in the advancement of knowledge among his pupils. Such as the latter was the subject of our writing, and to his careful preparation for this phase of his life-work as a scientist we are happy to bear tribute. The same general impression is ours in regard to his writings, of which there were several books and pamphlets, and one unpublished manuscript for a book on religion bearing the title of "Gospel of Might." Perhaps he was best known as an author by his book entitled "Investigations on Swine-Plague," a most helpful and practical work for scientists, students, farmers, and stock breeders.

He was a close student of sociology and wrote a book giving a most interesting discussion upon one phase of the subject, this book bearing the title "How Shall the Rich Escape?" He was a regular contributor to medical journals and to many stock-magazines, and the editors and subscribers of these had many favorable comments to make upon his contributions.

During his later years many were able to visit him in his home and to learn something of his great personality. Those who were his friends bear testimony to the high and noble character that was his and the ideal life he led as a husband and father.

A character like his is not to be forgotten. His discoveries and works remain with us and are monuments to mark the progress of a faithful student, a great scientist, and an American citizen.

EUGENE S. TALBOT.

Chicago, Ill.

DOSAGE OF PHYSOSTIGMINE IN COLIC

In my note on the dosage of physostigmine [November, p. 1135], perhaps I should have placed more emphasis on the fact that the large dose was advised only for severe attacks of colic.

Physostigmine, like morphine, seems to be antidoted or its action suppressed by pain. Once I took an experimental dose of three granules (not 5, but 3) when there was no indication for it. It was just after a meal. In a few minutes I felt the sensation of swelling in the throat, which is the sign of saturation. Then excessive peristalsis started up in the stomach and intestines. Wherever the peristalsis-wave met an obstruction, as at the pylorus or when bending at the waist, or even when the thigh was flexed on the abdomen, the direction of the peristalsis reversed. Several times my dinner came up in my throat and had to be choked down again.

At the same time my mouth was flooded with saliva, so that I could hardly swallow it fast enough. I found that holding a piece of dry bread in the mouth till it was dissolved modified all three symptoms considerably. As soon as the bread was gone, they returned just as strong as before.

I do not know how long this would have lasted, for I soon got tired of it and antidoted the unpleasant effects of physostigmine with atropine. It took a fiftieth of a grain to make me comfortable.

I have employed physostigmine mostly in infantile colic. One granule on the tongue of an infant under one year does the business.

By the time the granule is dissolved, the colic is gone. It stays gone, too.

I doubt whether there is any real difference of opinion between Dr. Candler and myself on this subject. I certainly have reason enough to believe in the small repeated dose, as a general rule. But the single dose also has its advantages in selected cases.

CHARLES F. MORRISON.

Apopka, Fla.

THE KIND OF HELP HE WANTS

Enclosed please find the renewal of my subscription. Your valuable journal is the one medical publication that I cannot very well do without. Each monthly issue brings me a whole mine of practical knowledge, the kind that is not found in the textbooks.

I derive immeasurable help from the articles telling of how others have failed. This is just what most of us fellows need. We too often hear of the man who has been successful (?) in all he undertakes. The majority of us do not belong in his class. We want every obstacle and pitfall along the roadway of medical practice plainly labeled, so that those who come after may avoid them. This is the kind of work your journal is doing.

MARTIN E. SHULTZ.

Punta Rossa, Fla.

HINTS ON SURGICAL PRACTICE

Never confine old people to bed very long. This, because of their tendency to fatty and dilated heart and liability to hypostatic congestion of the lungs.

Never use a hypodermic syringe upon a patient in the secondary stage of syphilis. [Hypodermic medication is much employed in syphilis. Perhaps Dr. Pitkin wishes to advise against using the syringe successively upon the syphilitic and nonsyphilitic.—ED.]

Never permit a wet-nurse to be employed without first examining into her history and state of health.

Never permit a healthy wet-nurse to suckle a syphilitic child or a child of syphilitic parents.

Never be hasty in suspecting "malingering" about any disease, and certainly never in head injuries.

Never neglect to bandage carefully the *entire* limb, if you have encircled the member at any one point to keep up pressure upon a wound.

Remember that three drugs are tolerated well in proportion to the need for them, namely, opium, mercury, potassium iodide.

Always inject ergotin or mercury into a muscle, but morphine or brandy under the skin.

Never inject morphine without first testing the urine for albumin or low specific gravity.

Never leave a sprain too long at rest. Prolonged inaction is by far the most frequent cause of delayed recovery after injury of the joints.

Avoid cathartics, deprivation of nourishment, and loss of blood (by incision) in the weak and brokendown.

Remember that drunkards, children, and patients with jaundice or splenic disease bear loss of blood very badly.

Be careful of opium in delirium tremens when the pupils are contracted.

F. A. PITKIN.

Palmyra, N. Y.

SEXUAL PERVERTS AND THE LAW

Returning recently to this city, after an absence of some few months, I visited several places of interest in Chicago, and among them I dropped into the criminal court for a few moments. One of the state attorneys was delivering his closing address to a jury in a trial. I leaned eagerly forward to hear what he had to say; for one can often learn a great deal from such an address.

The case was that of a man accused of rape upon his own daughter, fourteen years old, or thereabouts. Not having been present during the testimony of the witnesses, I did not learn the details of the case, but I got the summary and heard counsel's arguments.

The state attorney, his eyes flashing with righteous indignation, and in a high resonant voice, pictured the accused man as a bipedal brute who, instead of protecting his child of tender years, not only had outraged the laws of nature, but violated the laws of the state, for both of which he should be punished.

The defending attorney, just as vehemently, agreed with his opponent that if the accusation were true the defendant should be severely punished, but insisted that such a crime was incredible—it could not exist among civilized people. He admitted that the defendant had confessed his guilt at the police station, but declared that if he had done such a thing it must have been under the influence of drink, when he was ignorant of the wrong he was committing.

After five minutes of instruction by the judge, the jury retired to consider the case, and, as I sat quite near the defendant, I took occasion to scrutinize him very closely.

Although I am not a criminologist, I could plainly see that he was a fit subject for an institution for the insane. He had none of the earmarks of a criminal. Any layman could have told the same story by merely looking at him.

In a few minutes the jury returned with a verdict of guilty, and fixed the man's punishment at imprisonment in the penitentiary for the rest of his natural life. I watched for any commotion—none. The prisoner stood as though nothing had happened, just as though his case had been continued for trial to another day. The jury was discharged, and some of them came and sat among the spectators. I looked them over, and they seemed to me to feel very complacent over their performance.

This case is typical of the miscarriage of justice that is going on daily in our criminal courts because of the ignorance of judges and juries in matters of mental pathology. There is no question in my mind that this man was suffering from a disease of the brain—a volitional insanity, which—while it permitted him, like many insane persons, to talk and act normally on all ordinary occasions—during the attack deprived him of the power of inhibition, and thus virtually cancelled his sense of right and wrong.

The very nature of the crime with which he was charged is almost enough of itself to indicate his insanity. It is preposterous to suppose that any man, in this twentieth century and in this civilized community, would deliberately and volitionally commit such an act over and over again with his own minor daughter (it was shown that his relations had extended over two years previous to his trial) and then calmly confess to the crime. Had the jury known anything of the literature of sexual perversion or had there been any *amicus curiae* in court to advise them on the subject, they would doubtless have dealt very differently with this mindless, irresponsible subject. The records are full of just such acts performed by irresponsible sexual perverts.

I repeat, this man was not, and is not, a fit subject for imprisonment in the penitentiary. He should have been sent to an asylum for the insane, among whose inmates my own experience as an interne in such institutions has shown me there is a large proportion of sexual perverts. I reiterate, also, that this case is representative of similar blunders that daily discredit our criminal courts. It is high time that some systematic plan be adopted for dealing with such cases in a scientific, intelligent, and humane fashion.

SOL GOLDEN.

Chicago, Ill.

[The whole question of the relation between criminality and mental responsibility is an exceedingly vexed and difficult one. As between the view which holds all men to be the helpless victims of heredity and circumstance, with their lives irrevocably and inescapably marked out for them, and that which holds them personally and absolutely responsible for every secret thought, whether it be good or whether it be evil, there is a regular sliding scale of degrees and proportions; and just where the element of mental responsibility slides out of existence—or, at least, becomes submerged in the other elements—is very hard, indeed, to say.

Especially does the question of impulsive insanity present a practical problem of great difficulty. From the purely medical standpoint, no doubt, it is simple enough. So are fits of anger. So are the condition and conduct of a man under the influence of drink. But from the sociologic, legal standpoint, none of these cases are nearly so simple. In types of insanity where the capacity to know the nature and quality of an act is clearly and continuously absent, the matter is simple enough, even for the law and society. But where the will enters into the equation at all, there the problem is a nice one. In those cases we must assume some degree of workable responsibility in the individual; the essential aim in his treatment must be determent and correction; and punishment, in some form or other, is one of the most effective factors in bringing about this end.

The subject referred to by the author, I think, can hardly be classed among the victims of impulsive insanity. His crime, which extended over two years or more, did not consist in uncontrollable explosions of passion, regardless of the object on whom they were wreaked, but rather in the repeated, dogged performance of an unnatural sexual act. If, therefore, as seems likely, he was a sexual pervert, it is reasonable to believe that his perversion was an inherent, biological taint which no known treatment could eradicate. Practically, therefore, in his particular case, it would not make so very much difference whether he spent the rest of his days in an insane asylum or in a penitentiary. Possibly he would furnish a good case for the modern procedure of asexualization. I question, however, whether such treatment would do

more than to divert his perversion into other channels.

In the main, however, Dr. Golden is doubtless right. The treatment of perverts and criminally insane needs radically reforming in the light of modern science. And, by the same token, so does the treatment of crime and the criminal in general. It needs that there should be more intelligent co-operation between the various phases of society—including the medical phase—in dealing with the matter.—ED.]

FOOD ADULTERATION: A CRITICISM

I am surprised at the appearance, in your valuable journal, of the articles written by Charles F. Lynch, D. V. S. There is nothing absolutely untruthful in Dr. Lynch's statements—or rather the untruths that he utters are of minor consequence—but the deductions likely to be drawn will have a bad effect upon the public mind.

The adulteration of foods by no means is of such frequent occurrence as Dr. Lynch assumes, while those that he mentions have been largely done away with. For example: no such thing as "iron brew" is being sold in Illinois at the present time, nor has it been sold within the last two years. Further, the bogus ice-cream, the formula for which, he states, was sold to the trade not long ago for five dollars, could not possibly be offered for sale now anywhere in the country, nor the formula find a purchaser.

It is not possible to make a categorical denial of all the things he asserts, as a whole; for some of his statements are true. Thus, for instance, capsicum is used in the manufacture of ginger-ale in Chicago, under a ruling of the food commission, according to which it is proper and the fact need not be declared on the label. Also, many organisms can be found in ice-cream, as well as in milk and in cream not frozen. These things do not mean anything to an intelligent informed person. But there is a likelihood of their coming to the attention of the laity, and, appearing in an authoritative medical work, may give rise to gross misinterpretation.

If Dr. Lynch meant to say that cocaine appeared in coca-cola, he is "off his base" There are some imitators of coca-cola who have, indeed, added cocaine. Coca-cola is a trademarked name, meaning just one thing, and it contains none of the active alkaloid derived from the coca leaf.

Dr. Lynch's statement, that the Referee Board has condemned saccharin, is an example of a minor untruth. He probably had not read the decision.

I might state, in conclusion, that the danger of poisoning from salts of lead in carbonated beverages has been entirely eliminated in Chicago, as a result of the agitation referred to by Dr. Lunch, and of the investigation in which he participated. It seems unfair to revamp that circumstance or even suggest that conditions of that kind are prevalent now.

H. B. MEYERS.

Chicago, Ill.

[Mr. Meyers being the editor of *The American Food Journal*, his letter is of peculiar interest. We have given Dr. Lynch an opportunity to reply and his communication follows.—ED.]

Dr. Lynch's Reply to Editor Meyers

The object of every truly up-to-date manufacturer of foods should be the manufacture of pure products, and the education of people—yes, even of the layman, as well as the professional man—to demand that their dealers supply them with products that are above criticism. There was a time when dealers and manufacturers were opposed to the education of the public along these lines, but today the man who is really doing an honest business in pure goods wants the public to know what to expect and how to detect the fraud in the goods of a dishonest competitor who, by the addition of dyes, saccharin, preservatives, coal-tar derivatives, and by other improper practices, is enabled to put out goods at prices which no honest dealer can approach with a fair margin of profit.

Mr. Meyers' communication is so entirely foreign to the modern trend of opinion that it seems a loss of valuable time to give it more than passing notice; but for his own information I will take up a few of his statements and compare them with the facts.

For instance, Mr. Meyers states that there is no extensive food adulteration now going on in the lines I have discussed in my articles! This is a very optimistic statement, in the light of the facts, which in part are as follows:

In the year 1911 the Illinois Food Commission examined 100 samples of butter, renovated butter, and oleomargarine, and found that 37 samples were legal, while 63 were illegal. No, Mr. Meyers, there is no adulteration at all going on in these lines! Do you think the state of Illinois is wasting money in taking samples when only 63 percent of them are found adulterated or sophisticated?

We might take a look at the beverages, also. The Illinois Commission examined 62 samples in 1911, and 35 of these were found illegal. It is true, perhaps, that since the prompt action of the Chicago and Illinois health officials in closing up a Chicago pop-factory, putting out a lead-laden product, the Chicago manufacturers have been a bit more careful. But the same degree of caution does not appear to have seized upon dealers in other parts of the state, as witness the finding of lead in samples of beverages originating at Belvidere and Elgin. It would seem almost pitiful that the medical profession, or even the laity, should need to be told that such a danger exists.

It is true that coca-cola does not contain cocaine, but how about caffeine? Should American children be allowed to drink caffeine-laden beverages without restraint? This is a question to be considered.

In another brilliant passage Mr. Meyers makes the astounding statement that to the "intelligent" person the presence of many bacteria in milk or ice-cream has no significance. In this singular position he is at variance with practically all our public health-officials and the general consensus of modern medical opinion. Twenty-seven million bacteria per cubic centimeter in ice-cream, many of these being pure strains of virulent streptococci—does this mean nothing to the intelligent mind? What do the readers of CLINICAL MEDICINE think?

To any physician, statements such as these made by Mr. Meyers relative to the bacteria in milk and milk products would be humorous, were it not for the grim facts that stare us in the face every summer in the form of hundreds of solemn processions, each behind a little white coffin, each holding the body of an innocent who has been the victim of these same bacteria the presence of which means nothing to the intelligent mind! Herod's slaughter of the babes pales into insignificance alongside the ravages witnessed every summer in our own cities as the result of bacteria-laden milk, and this without any referecne to the possibility of the transmission of tuberculosis and typhoid-fever through the products of careless dealers.

As to the fear that the laity may become aware of the frauds that are being practised upon them in the food industry, that would, indeed, be a sad state of affairs! This is one of the arguments advanced by many dishonest dealers when they are brought to account for violations of the Pure Food and Drugs Law. They claim that the fraud has been practised so long that it is an infraction of their rights to object to it!

CHARLES F. LYNCH.

Chicago, Ill.

PERNICIOUS VOMITING OF PREGNANCY

Permit me to avail myself of your invitation in the November issue of your esteemed journal to those of your readers who might have a word to say on the subject of vomiting of pregnancy.

The literature of this condition is very voluminous. This was again demonstrated by Dr. C. B. Ingraham, of Denver, who read at the last session of the American Medical Association in June, 1911, a lengthy paper on this subject and quoted sixty-three publications. But neither he nor any of those who took part in the discussion mentioned the most rational, the physiologic remedy in cases of reflex vomiting of pregnancy of which I have spoken repeatedly in different journals and especially in my book "Carbonic Acid in Medicine." I published my observations in the year 1884, and Adrian Schueking gave his experience with the same remedy in the year 1885.

The remedy is carbonic-acid gas douches applied into the vagina or into the rectum by means of a gas-generator which I have introduced. The anaesthetizing[1] of the gas will, as I and Schueking (independent from me) have demonstrated, arrest reflex vomiting.

Reading the correspondence on vomiting of pregnancy in the last numbers of your journal, I was, as I have been too often, disappointed, because no reference to this method was given.

And this remedy is simple and it is harmless, but there exists a ghost story, on account of which it is not accepted, on account of which it is not even spoken of. I may be permitted to quote from my book mentioned something about this ghost story.

Early in the year 1884 I was called to a neighboring city as a consulting physician in a case of incessant vomiting of pregnancy. All the usual remedies had been tried in vain. I suggested the application of carbonic-acid gas douche to the os—this being a case of reflex vomiting originating in uterine neurosis—but my suggestion was not accepted.

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[1] I beg of you not to print anesthetizing, because that means undressing. Anaesthesia means insensibility, but anesthesia means without clothes or nudity. Anaemia is poverty of blood; anemia (from anemas, the wind) is inflation, anemia is windy.

It happened that my colleague, a great, well-read gynecologist, believed in Scanzoni's nightmare of contractions of the uterus and the danger of abortion if carbonic-acid gas was employed. The error of Scanzoni has been exposed by many physiologists, by gynecologists; it has been demonstrated over and over again that carbonic acid introduced either into the vagina or into the rectum will never cause uterine contraction, will never produce abortion, how often or how long you may try. I myself have had a case in which a pregnant woman, in consequence of a misunderstanding, made daily carbonic-acid gas douches every day during the first three months of pregnancy, without any unpleasant effect to herself or the embryo, without interruption of the pregnancy.

In the book quoted I have given the history of Scanzoni's error and spoken of as experiments made on pregnant animals to prove that Scanzoni was mistaken. Scanzoni is dead, but his error haunts us yet. It seems inpossible to bring it out of the heads of some physicians that carbonic acid is not a means to produce abortion. While carbonic-acid gas douches do not cause uterine contractions, they are, besides arresting vomiting of pregnancy, an excellent remedy in case of scanty menstruation or amenorrhea.

A. ROSE.

New York, N. Y.

[We are always glad to hear from Dr. Rose, because he invariably has something worth saying. We have not forgotten his suggestion of some years ago relative to the use of carbon-dioxide gas douches for the relief of intractable vomiting. If we had such a case that resisted other methods of treatment we certainly should try it. However, the use of alkalis, as recommended by Blodgett, is based upon sound logic and the alkali is so easily administered and so effective in many instances that we may be pardoned for considering this remedy first when the indication for it is clearly present.

As to Dr. Rose's gentle reproach anent the spelling of the word "anaemia", we shall have to dissent as gracefully as possible. With all due deference to the classic origin of much of our language, may we not point out that the tendency is to "shorten, concentrate, Anglecize and Americanize," thus making our written words simpler, easier to learn and easier to use.

"Anemia" is an English word—*not* a Greek one as we employ it. It must yield (and so must our Grecian, in spite of his classic affections) to the iconoclastic (because clarifying) tendencies of the times. Time was when we (or rather our ancestors) used to refer to aera, aether, coelestial, oeconomy, foetus, foederal, and many other such words now relegated to the limbo of anachronism. Three-fourths of the ae's and oe's have already been dropped, the rest are disappearing rapidly; and we are but following the guiding hand of common sense in adopting the simple e. So we see it—with the highest respect for the fine scholarship of Dr. Rose.—ED.]

THE TREATMENT OF PAROTITIS

Some three weeks ago I was called to the country to see a young man, aged 24. I found the following condition:

Temperature 104.2, F., nausea, excruciating pain in both testicles, and he said every bone in his body hurt. Although the parotid glands were not involved I suspected mumps. Upon inquiring I found he had been exposed two weeks before. He had been working in a ditch and got his feet wet.

I gave a hypodermic injection of morphine and atropine to control the pain, a saline laxative to move the bowels, following with aconitine, sodium salicylate, echinacea and calcium sulphide.

Now comes the part of the treatment I wish to call particular attention to: What shall we do for those congested, inflamed and painful testicles? Make a paste of bismuth subnitrate and cold water, spread on a soft cloth and apply. In three or four hours the pain and swelling will all be gone—and it was!

I have used the bismuth for years in all inflamed glands, and I never knew it to fail. Don't forget to try it the first opportunity. The above case made a speedy recovery and was out in the harvest field in ten days.

DAVID C. RONEY.

Ridgeville, Ind.

[In parotitis calx iodata, phytolaccoid, and irisoid should always be given. We believe these drugs could have been beneficially substituted for the sodium salicylate and echinacea in the cases described. Guaiacol, one dram to one ounce of a mixture of vaseline and lanolin, makes an excellent local application. The guaiacol ointment may advantageoulsy be applied to the testicles, or one part of belladonna ointment to three of carbenzol may be used first, and the guaiacol later. The scrotum should be supported. Gelseminine may be pushed in comparatively full doses. It is a little difficult to see how a

paste of bismuth subnitrate could reduce testicular congestion, as the drug is not absorbed by the unbroken skin.—Ed.]

BILOXI'S BILATERAL BUMPS

Notwithstanding his laborious efforts directed toward the advancement of science, it is extremely probably that the name of Dr. William Biloxi would have died with him had not a fortunate chance or circumstance otherwise directed.

Not all of us are born great; a few of us have greatness thrust upon us, but occasionally one of our illustrious profession, though painstaking effort and peculiarly lucid observation, becomes truly great and is so recognized by the scientific world after he is dead. And such a man was Dr. Biloxi. It is, therefore, with peculiar pleasure that we, as his biographer, are able to say that his name will always be illustrious, and that it was given to us to tell how it became so.

It will be remembered by many that Dr. Biloxi, independently of Ernst Haeckel, announced (May, 1904) as a basic law that, briefly formulated, "things are as they are, because they can not, without vast cosmic disturbances, conveniently be otherwise"—a conception, however, the effect of which was minimized at the time by a wave of dualistic philosophy which swept scientific circles. Also (in 1905) Dr. Biloxi discovered a method whereby sound vibrations passed through chromogenetic crystals could be transformed into light-waves and projected onto a screen in colors. It will further be recalled that at the first private demonstration of the discovery before a body of noted scientists the "Miserere" from "Trovatore," rendered by a famous orchestra, was exhibited, but to Dr. Biloxi's great sorrow the chromatic audition was so pronounced, somber, and depressing, that a few of the judges had to be restrained in sanitaria for months afterward; and its furtherance was forbidden as a public menace. Still, in spite of these partial failures, Dr. Biloxi continued his work and investigations.

From his voluminous notes and writings which lie before us we quote as illustrative of the character of this remarkable man:

"Oh, to have been the first who thrust a broom-splint through the foramen of Vesali and saw it protrude on the other side; or have explored the foramen of Winslow and had it named for me; not even Magellan as he steered his devious course through the strait could have been so proud! But the anatomical field of discovery is barren. I must go farther afield. I will await the time when something presents itself, then I will describe it with methods for its successful jugulation, with copious notes and references (should there chance to be any) and then; ah then, will the name of Biloxi be famous."

Such were the laudable aspirations of this man. Their fruition occurred in the manner now to be described.

In one of his talks with his friend, the professor, he had heard that learned gentleman speak of a Chinese laundryman as a xanthochroous heathen. The adjective sounded sonorous and good, so the doctor looked it up in Gould's against the time when he might like to use it himself.

By the merest chance (on such slight things does human destiny hang) he idly turned another leaf of Gould's admirable work as that colossal conglomeration of plentiful fact and desiccated definition called the "Dictionary of Eponymic Terms" lay before him. That he never before had explored the dictionary, we cannot affirm; that on this occasion he perused it as if it were the most exciting romance, we have his word. Like a half-starved horse seeking nutriment from baled shavings, a most unpromising source, he fairly devoured it.

"Absolutely the most unique and delightfully quaint bit of medical literature (to distinguish it from medical fiction) we ever encountered." These were his very words. "Bless me! here is Banti's disease we heard about somewhere"; and he read the definition: "Banti's Disease—Enlargement of the spleen, with progressive anemia and hepatic cirrhosis."

"Now, that shows how a little learning may be a dangerous thing," soliloquized the doctor. "I always thought Banti's Disease was the trouble induced by following Banti's Obesity Treatment, Gould sets us right, as always. The definition does not say Banti had an enlarged spleen and cirrhotic liver, but he certainly must have been the very first to observe this condition in others. Let us investigate this further."

"Abadie's Sign"—Spasm of the palpebræ in goiter.

"Anderson's Alopecia"—Baldness observed after the age of 70.

"Andesey Leg"—A kind of artificial leg.

"Alcock's Plaster"—A patent porous plaster, erroneously supposed to have been invented by Dr. Alcock.

"Aviator's Aphasia"—A new form of vocal paralysis, said to affect aviators when a biplane buckles.

"Beard's Disease"—Nervous exhaustion.

"Marvelous!" exclaimed the doctor. "What trained powers of observation and exquisite art of logical definition these men had."

"Bastock's Catarrh"—Hay-fever observed frequently in trained wild animals. Supposed to be caused by the animals standing on their heads so much, with consequent congestion of the Schneiderian membrane. (Vide Schneider.)

"Dingbat's Dragees"—Sugar-coated pills invented by Dr. Dingbat.

"Drummond's Sign"—The oral whiff, not an odor, but a sound heard when the mouth is closed, and disappearing on compression of the nostrils; observed in aneurism of the aorta."

"Now, what do you know about that?" said the doctor. "A 'whiff' becomes a sound when the mouth is closed, and disappears on compression of the nostrils. Seems to me it must be an odor, after all. Perhaps Drummond was mistaken; some have been." (Right here let us say, Dr. Biloxi under strong excitement sometimes dropped into the vernacular—with one less gifted it would be called using slang, with Dr. Biloxi it was simply an eccentricity of genius. We apologize for being his apologist.)

"Goodell's Law"—"When the cervix is as hard as one's nose, pregnancy does not exist; when it is as soft as one's lips, pregnancy is quite possible."

"I must make a mental note of that fact," said the doctor, and he closed the book, and his eyes at the same time, the better to fix indelibly in his mind all the details of this wonderful law.

Carelessly his hand fell to his knee. How wonderful is the association of ideas! Think of a delicately browned pretzel powdered so generously with crystals of chloride of sodium that your throat is fairly parched. What! Correct. You guessed it the first time. But we disagree. It was at this precise moment we have been informed by Dr. Biloxi that the remembrance of the peculiar fact, the description of which was to immortalize him, slowly yet grandly and irresistibly forced itself from the dim chambers of his subconscious mentality and became a burning, living truth in that portion of his brain he used every day.

To seize paper and pencil and, in his clear, concise and conscientious manner, name, describe, and definitely define this wonderful discovery was the work of but a moment; to make it known to the Powers that Be, the work of a few hours.

Recognition was compelling and immediate and in the very next edition of the "Dictionary of Eponymic Terms" might have been seen, and no doubt has been seen, by envious thousands the following:

"Biloxi's Bilateral Bumps—Ecchymotic spots on the inner lateral aspect of the knees, observed in thin people. Caused by pressure of one knee against the other while sleeping. Usually seen in the morning."

And thus, as we said in the beginning, it is extremely probable the name of Doctor William Biloxi would have died with him, had not a fortuitous chain of circumstances otherwise dictated.

A. H. Southwick.

Limestone, N. Y.

PRENATAL LIFE UNDER "TYING" CONDITIONS

Many a time I have seen twists and kinks in umbilical cords, as well as one or more coils of the cord being around the neck or other parts of the body of the infant, with no ill effects to the latter. But about two years ago I had to deal with a condition such as, up to the present, I have never known to have a parallel.

In this case, the position of the child was normal, being a left occipitoanterior. The delivery was not extraordinary, but on examining the cord and *before severing*, I observed a complete knot six or eight inches from the child. The striking picture in the case was that the child was living and had apparently suffered nothing from the condition.

Quite likely early in uterine life the embryo had floated through a coil of the cord, while doubtless the placenta was attached sufficiently low so that during delivery the knot was not drawn tightly, consequently the fetal circulation was permitted to proceed uninterrupted.

Reid Owen Howser.

Chicago, Ill.

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[True knots are occasionally observed, but usually are harmless, since the constrictions rarely are tight enough to completely obliterate the lumen of the vessels. They are due, of course, to the fetus slipping through a loop of the cord, and the process may even be repeated either during pregnancy or while the child is descending in labor, resulting in a double knot.

Barton Cooke Hirst cites a case of his own observation in which the cord showed a true figure-of-8 knot in the case of twins in a

common amniotic cavity. In twins, knots are apt to be far more serious and more complicated; knotting of the two cords may occur if the knots are drawn sufficiently tight so as to shut off the placental blood supply completely. The life of the fetus is endangered, of course, and eventually sacrificed.—ED.]

SOME DON'TS REGARDING HABIT DRUGS

Having had nineteen years of experience in the work of treating the drug- and liquor-habits, and—I am sorry to say—the large majority of my patients coming from the medical profession, I feel that possibly I can present a few pointers gained from experience under the head or title I have chosen, which, if you will give me space through your columns, may be the means of benefiting the few, if not the many, and not alone the profession, but the ones as well that may come under their care. Hence the title. First, I would say:

Don't forget that all habits are soul education or subjective mind training through the objective or sense mind.

Don't forget that you are only human and that drug-habits will fasten themselves upon you just as readily as upon your poorest patrons, and will make you just as much trouble and expense in freeing yourself from their bonds as they will others, since not one percent can quit drugs without help.

Don't forget that narcotics and stimulants are habit producers, or callers out of reserve energy; the use of this reserve energy is like borrowing money from a bank. It must be paid back and the interest is a mighty high rate.

Don't forget that when you give a narcotic you have blinded your eyes to the true condition of your patient, since pain is the language of the soul, telling you where the trouble is located. The soul is calling for help, the same as hunger, also in the language of the soul, calls for sustenance to rebuild the body.

Don't forget that, if you are once addicted to the use of some drug no matter how complete the recovery may seem to be, you are never quite as free as before. With the least excuse, you are ever after subject to the same slavery, be it five, ten or any number of years later.

Don't forget that any opiate enslaves, be it morphine, codeine, heroin, laudanum, paregoric, Dover's powder, plain opium or Mrs. Winslow's soothing syrup. You can substitute any one for the other in proportionate doses. Opium is "king-bee" among the habit-forming drugs and may be substituted for any or every other drug.

Don't think you can give any opiate, no matter how well disguised, to a patient who has once been addicted and he not know of it. He can tell it as readily as he could a shock from a strong electric battery, even though ten or more years had elapsed since his "cure," and the nerve call for the drug will begin at once and but few can resist it. Hence be careful.

Don't forget that to have a liquor habit fastened upon you is a thing you cannot afford, since it means sacrifice of everything, with degradation and perhaps the poorhouse or the insane asylum at the end. Don't forget that any opiate is much worse than liquor and that it requires much more time and money to get free from its bonds than the latter.

Don't forget that a cure for the morphine habit cannot be accomplished by the prescription that is given by many physicians, which consists simply in the suggestion: "Why, if you do not want to use it, just quit." If you think you can do this, try something easy first. Stop your tobacco. You cannot do that. Try it. I say you can not and stay free from it and the Lord have mercy upon your family while you are trying.

Don't think that, if you are addicted to liquor, you have gained anything by stopping liquor and using morphine in its stead. You have jumped from the frying pan into the fire.

Don't think that all men who advertise cures for drug or liquor habits have one. I would advise anyone seeking assistance to investigate thoroughly before placing absolute confidence in any man. If an institute will not bear investigation even to the extent of seeing patients under treatment, that is the one you do not want to go to, expecting a cure.

Don't think for one minute you will ever find a "home cure" for any opium habit. These are made to sell, not to cure you with. The liquor habit can be cured at your own home providing some of your medical friends see to it that you use the remedies directed, and you, yourself, want to be cured.

Don't think you must suffer untold agony in order to be cured of the drug-habit, for there are a few places where you can be cured without sickness or suffering.

Don't go to a "cure" where they cure in three days. It may require three years or longer to recover from the "treatment" given.

Don't go to a "cure" and leave with a bottle of medicine as a tonic to take to "build you up," for usually it contains dope of some kind, and when stopped you are no more nearly cured than before you went there.

Don't think for one minute that you or anyone else can be cured by a substitutional treatment, for a substitute is just as bad as the real thing. The only proof of cure is that you have to take nothing more for relief. Yes, nothing.

In conclusion, let me say, don't forget that an ounce of prevention is worth a pound of cure; and don't forget, further, to establish in your mind and for yourself this motto: "A slave to nothing or to nobody."

C. E. PATTERSON.

Grand Rapids, Mich.

THE DIAGNOSIS AND TREATMENT OF ECLAMPSIA

A. J. Skeel (*Cleveland Medical Journal*, May, 1912) deprecates the rather loose mode of speech according to which eclamptic seizures during gestation, labor or confinement are said to occur without warning, and he claims that, as a matter of fact, no eclampsia probably does occur which does not give preliminary signs of its onset to a careful observer. The author differentiates between the nephritic and the hepatic types which often are associated, since degenerative processes occur both in liver and kidneys in eclamptic toxemia, but nevertheless either one or the other may predominate.

The nephritic type in which marked albuminuria, high blood pressure, and extensive edema occur is frequently easy of early diagnosis and offers a more favorable prognosis. In these patients the renal deficiency probably is relatively greater than the damage in the liver.

In the hepatic type, on the other hand, the entire renal group of symptoms may be inconspicuous—albuminuria slight, blood pressure low, edema scarcely noticeable. These cases fortunately are much more rare. It is these that are apt to deceive us by the apparent mildness of the condition, until after a few days of slight symptoms the patient develops sharp headache, dizziness, and convulsions of the severest kind, all within a few hours. These are the cases, too, which most frequently terminate badly in spite of treatment.

Of all the clinical warnings, especially in the nephritic type, albuminuria is the most uniformly present before onset of convulsions, and the author claims that with proper care albumin can be found within twenty-four hours of the appearance of the spasm in certainly 95 percent.

Next in order of frequency and reliability is the rise in blood pressure, and perhaps next the most common symptom is occurrence of edema. These three symptoms—albuminuria, rise in blood pressure, and edema—appear all to be associated with renal deficiency and usually are grouped. When one of these symptoms is marked, all of them are likely to be marked; and the reverse.

In a patient with normal kidneys before pregnancy, the persistent albuminuria, even if slight, is of greater importance than a larger percentage of albumin that disappears readily on treatment. In the routine clinical work with urine, the continued control of the 24-hour amounts, the specific gravity, the quantity and persistence of albumin, are of importance.

Next to the continued urine testings, blood-pressure readings should be made regularly and the presence of edema be looked for. Aside from this, the occurrence of headache, nausea, disturbance of vision, vomiting, dizziness, epigastric pains, etc., are of importance. Further, albuminuric retinitis, edema of the optic disc, and increase of leukocytes may be present, and, if so, are suggestive, although their absence is of little importance.

In regard to treatment, the author maintains that the fetus participates proportionately in the degenerations occurring in the maternal organism and that, therefore, the interests of the child are the same as those of the mother.

Whenever under reasonably vigorous treatment of elimination the mother does not improve, labor should be induced. As a whole, the further advanced pregnancy is, the less the attendant need hesitate to induce labor. Near to term, labor may be induced on relatively slight indications, but before doing so, no matter at what stage of pregnancy, it is important to secure vigorous elimination for a short time before, in order to diminish the accumulation of convulsion units previous to the strain both upon mother and child entailed in the process of parturition. This will remove her as far from the danger of convulsions as possible.

On general principles, that method of delivery should be chosen which will empty the uterus most expeditiously. When the patient is allowed to deliver in the normal way she

is put to excessive physical endurance. If the cervix is already opened, the forceps or version will deliver in a relatively short time and avoid hours of physical labor. If the cervix is closed and unprepared for labor, the author holds that vaginal or abdominal section offers the right means of emptying the uterus rapidly; he claims that the high mortality after abdominal cesarean section for eclampsia is due to the fact that the procedure was resorted to as a last resort and holds that if done at the time of selection the operation is of comparatively slight danger.

As to the anesthetic, none is needed when the patient is in coma, while patients in partial coma interrupted by convulsions should have morphine and perhaps a little anesthetic. Chloroform appears to be the least desirable anesthetic, because of its effect upon the liver. Ether is probably preferable to it, or nitrous oxide would be the anesthetic of choice in eclamptic conditions.

In regard to the medicinal treatment, the author warns against undue continuation of hot-packs for patients who do not perspire, lest heat-stroke occur. The hot-pack should not last longer than thirty minutes, should not be repeated oftener than once in three hours, and its use should be controlled by its effect on pulse and temperature. In some patients who do not bear complete hot-packs well, a large lumbar pack seems to have a favorable effect; except in patients with immense edema the use of normal salt solution will stimulate renal secretion and favor perspiration. When the tissues are already water-clogged, bleeding often proves beneficial, and this may be followed by the administration of normal saline solution.

Catharsis may be very difficult to induce but often will follow promptly if the desired medicines are introduced by the stomach-tube after irrigation of the stomach.

During the entire treatment the convulsion must be controlled, and for this purpose the author depends upon morphine in moderate doses—1-6, 1-4, or 1-3 grain hypodermically and repeated as necessitated by the recurrence of convulsions. Parenthetically, we may remark that the hyoscine, morphine and cactin compound is preferred for this purpose by those who have used it, since it controls the convulsions without tying up the secretions as morphine alone does.

In all measures taken for the relief of eclamptic patients, the keynote is elimination, and this must be secured at all cost short of killing the patient. The eclamptic patient requires the closest attention and will not let her physician divide his efforts with any other patient; but with deliberate and sustained efforts, it will be possible to guide many apparently hopeless cases through this terrible condition and to save their lives.

"ANXIOUS," GIVE US YOUR NAME

If the physician who addressed CLINICAL MEDICINE and signed himself "The Anxious," asking assistance in the case of Mr. J., afflicted with mitral lesion and hemiplegia, will forward his name and address, it will give us pleasure to advise him.

AN UMBILICAL PAD

My attention has been called to the various designs for "umbilical pads" for newly born children. The only really effective pad that has proven satisfactory in my practice is a leaden bullet or a marble (the bullet preferred) about five-eighths of an inch in diameter, covered, ball-fashion, with chamois skin and attached to the center of a piece of surgeon's adhesive plaster about 3 1-2 or 4 inches square (or in diameter, if a circular piece is used), the plaster being incised from the outer edge toward the center in several places, to admit of its being applied smoothly. Let it remain in place for a month or longer, as may be necessary. The integument will close in around the attachment, as if it were around the stem of a cherry. It can be readily removed.

GEORGE D. STANTON.

Stonington, Conn.

"WOMEN AS ANESTHETISTS"—A REPLY

In the September number of THE AMERICAN JOURNAL OF CLINICAL MEDICINE (page 952) there appears an article entitled "Women as Anesthetists." I cannot pass by this article and the editor's comments without a word of protest.

A *well*-trained nurse may give an anesthetic better than an *un*-trained physician, but I can not agree with the idea that women make better anesthetists than do men.

The administration of anesthetics has been much neglected in the past, but at the present time there is a great improvement in this respect over what it was a decade ago. How many of our medical colleges are today giving practical instruction on this subject? It is a fact that the medical profession has

not looked upon this work as of much importance. Anesthesia has in a large measure contributed to the success of modern surgery, and it is the duty of the profession that due credit be given.

There are many physicians who have served an interneship in a good hospital and are well fitted for this work. These men are willing to do this work, provided they are paid in proportion to the fee which the surgeon charges. It is unreasonable to expect that much interest will be shown in this work for a fee of five dollars, regardless of the operation or the time required.

I wish to protest against the practice of having nurses administer anesthetics. The chief reason, I believe, is a financial one, and not because the women do or can do the work better than physicians. Because certain well-known surgeons in different parts of the country employ nurses to give their anesthetics is not a good reason why the profession in general should follow that practice. If those surgeons believe that women are better anesthetists than men, why, then, do they not employ women physicians? I truly believe that the reason is a financial one.

I have no complaint to make against women physicians as anesthetists, but I do not think it is just either to the profession or to the public to employ nurses for the administration of anesthetics. The public is willing to pay for this work if the profession shows it the importance of the work. How often we hear patients say that they are not afraid of the operation, but fear the anesthetic. I know of an instance when a physician brought a patient to a hospital for a minor operation upon the hand and requested a nurse to administer the anesthetic, and she said, "Doctor, I would rather do the operation and have you give the anesthetic." This nurse evidently appreciated better than the physician the relative importance of the operation and the anesthesia.

In a number of our large cities there are physicians who have given especial time and thought to the work of inducing anesthesia. Is it not the duty of the profession to support them in this special line of work, and not to belittle it by allowing this duty to be taken over by nurses?

I realize that physicians in the country may occasionally have difficulty in obtaining the services of another physician for anesthetic work in emergency cases, and at such a time the aid of a good nurse certainly is a great help. However, I cannot countenance the idea that a nurse should do this work for the reason that a brother physician may not happen to be in full harmony with the operator. We need to work together in these lines, and it might be the means of bringing about greater harmony among neighboring physicians.

There is no better reason why a physician should employ a nurse to give his anesthetics than to take care of his obstetrical work. A well-trained nurse is a big help in her own appointed sphere; but, pray, let us not give her the work to do that properly belongs to the medical man himself.

RALPH P. PEAIRS.

Milwaukee, Wis.

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[We are glad that Dr. Peairs has made this comment, because it affords an opportunity to clear up our own position, which seems to be misunderstood by some. We do not advocate the discrimination by the surgeon against his fellow practitioners in favor of the nurse—to save money, or for any other reason. It is because we believe the surgeon should have the best-possible anesthetist assistant that we have advocated the preparing of nurses for doing this work *where physicians especially trained to do it are not available*. Particularly is this necessary in the smaller cities and towns. In large cities, there are good anesthetists who understand this work thoroughly, and in the larger hospitals, internes who have received careful training may be depended upon.

Anesthesia is too vital a part of the work of the surgeon to be entrusted to any man—no matter if he is a good doctor and a good fellow—whose principal qualification is that he happens to be "handy". This assistant should not be selected by chance, for convenience or from personal friendship. He (or she) should be accustomed to work with the operator regularly, so that the latter may have full confidence in his (or her) work, and thus be able to devote all his thought and attention to the operation in hand. In other words, the surgeon and anesthetist should be working partners—each a "specialist" in his own field.

In many localities such an anesthetic-assistant is best secured by especially training some one. The young doctor too often considers this work infra dig. He considers it a makeshift; and he is also mainly interested in building up his own practice, and the emergencies thus created must receive his first thought and care. But a nurse can be trained who will be the surgeon's *alter ego*—who will have no other thoughts, no other care

no other interest than to do *his* work to the very best of her ability. No question of money saving should enter into the arrangement at all. The only, the sole, consideration should be the welfare of the patient.

Under no circumstances should the surgeon employ an untrained nurse for this work, if that can be avoided. Where a trained physician is available—especially one who has given special study to anesthesia—he is the person who should be selected to do the work. —ED.]

FUNCTIONS OF THE CORPUS LUTEUM

Dr. Wilmer Krusen (*American Journal of Obstetrics*, October, 1912) describes the functions of the corpus luteum as follows: (1) They bring about obliteration of the ruptured graafian follicle, without the formation of cicatricial tissue. (2) According to Fraenkel, they prepare the mucosa of the uterus for the reception of the ovum. (3) They dominate the occurrence of menstruation. (4) The conclusive and convincing studies of Loeb prove that they are indispensable for the formation of the maternal placenta. (5) "The corpus luteum changes the periodicity of the sexual cycle; it prolongs the sexual period, the interval between two successive ovulations, by preventing the rupture of the follicle." (Loeb.) (5) Rebaudi believes he has demonstrated a functional connection between the pancreas and the ovaries, and that, when the functioning of the corpus luteum was deficient, the islands of Langerhans in the pancreas became hypertrophied and evidently were doing extra work. Similar changes were observed after the removal of both ovaries or after the destruction of the corpora lutea alone. (7) The corpus luteum seems to resemble the adrenals in its effects upon blood pressure and the vasomotor system.

MEDICAL SUCCESS AND DRUG KNOWLEDGE

I am always on the wrong side—that is, on the unfashionable side of every tendency in medicine. That is because I am of a judicial temperament instead of a partisan, and I always see the danger of going too far with a good thing. So, years ago, when nearly everybody was preaching climate for consumption, I urged the necessity of skilled treatment and careful management. Later, when home treatment became the fad, I spoke up in favor of the climates where the maximum of open-air life and sunshine could be secured, with the minimum of discomfort and neglect.

Nobody could be more appreciative of the magnificent work done by the modern surgeon, but I have to object to the preposterous claims of "no treatment but the knife" for maladies that are readily cured by nonsurgical methods. Moreover, when one hears the assertion, "There are no family doctors now—they only seek to find out whether a family has money and then to find some excuse to send to a city surgeon and pocket half the fee," it is surely time to utter a very emphatic protest.

Again, as to the modern scientific methods embraced under the head of laboratory work. Nobody has insisted more than I upon the necessity of the physician availing himself to the fullest extent of its priceless advantages; yet I have equally insisted upon the clinical, or bedside, studies of the doctor as well.

So it has seemed that I am always combating "progress," when, as a matter of fact, I have been seeking to be just. Yet, here is precisely the case I have foreseen: A prominent member of the United States Army Medical Corps, a man of brilliant attainments, has been court-martialed and sentenced to a reprimand because in his apparent zeal for scientific researches he neglected his patients! Exactly! That is what he is paid to do. But as long as glory merits the scientific investigator while obloquy and neglect are the mede for the faithful clinician, can we expect the ambitious youth to choose the latter?

The department of therapeutics in medical instruction has sunk so low in relative importance that a short time ago I found that three medical colleges in this country did not list a teacher of this branch on their faculties. Non-drug therapeutics was embraced, and pharmacology, but the principles of therapeutics, the application of drugs in the treatment of disease, were ignored. Not a solitary postgraduate school has a chair of this sort.

However, two Chicago colleges have taken up this matter and arranged to give their pupils a thorough course in modern scientific, up-to-date drug therapeutics. In these institutions the active principles, serums, vaccines, bacterins, opsonins, and other resources of modern science have been fully treated, as well as the numerous forms of non-drug remedies. The result is striking: while nearly everybody agrees that the medical profession is overcrowded, there are more openings for graduates of these two schools than there are men to fill them.

These graduates make good, too, and from all sides come reports showing the good work they are doing. "Three of your men are in my hospital; and, I tell you, they are cracker-jacks." "Young Doctor —— is a great physician; can you send me another like her?" "I have had one of your graduates here for a year, and I want another. Salary, $1500 and expenses." "I want one of your men to go to Alaska; $300 a month." "I want you to send me a junior partner, so I can retire in a year." "Your graduates put it all over us when in the sick-room." Lives are saved by prompt application of drugs when the consultants declare the cases hopeless.

These men are taught modern drug therapeutics—that's all. Any college could do the same thing if its faculty realized what it is worth.

W. F. Waugh.

Chicago, Ill.

A DIETARY TABLE FOR CONSTIPATION

In *The Medical Times* for July last, Holland discusses the dietetic and mechanical treatment of constipation, and he gives the following sample schedule for a twenty-four-hour period, this to be modified according to special requirements, taste or finances of the individual, but to be followed persistently as to time, regularity, and the principle of bulk in the diet. This is his scheme:

Upon arising, a glass or two of cold water, followed by five minutes' exercise; this to be followed either by a cold bath or the slapping of the abdomen with a towel wet with cold water. Dress.

Breakfast: A baked apple with cream; a large saucer of oatmeal with cream; a little butter and sugar; a soft-boiled, poached or scrambled egg, with or without bacon; several pieces of bran bread and butter; a cup of coffee with cream and a little sugar; marmalade or honey. For those who smoke, a mild cigar. Fifteen minutes after breakfast visit the toilet, whether prompted or not. One hour after breakfast, drink a glass of cold water.

Lunch (for a business man): Cold chicken or ham; any kind of salad (excepting potato); rye or brown bread and butter; a baked apple with cream; a glass of buttermilk or sweet cider. A cheaper menu: A rye-bread and ham sandwich; a baked or raw apple; a glass of buttermilk. For those at home: Cold meats, warmed-over vegetables, jam or preserves, with bran, white-wheat, graham or rye bread and butter, a glass of buttermilk or sweet cider. One hour after lunch drink a glass of cold water. At three or four o'clock take five minutes' exercise.

Dinner: Clear soup or thick vegetable soup; roast, steak or chops; two or three kinds of vegetables; salad with plenty of oil in the dressing; fruit pudding or oranges cut up; plain cookies; bread and butter as for lunch. One hour after dinner take a glass of cold water. At bedtime take three minutes' exercise. If the visit to the toilet in the morning was not satisfactory, go there again at this time.

GIVE A CORRECT, TRUTHFUL DIAGNOSIS

"He is the flower (such as it is) of our civilization; and when that stage of man is done with, and only to be marveled at in history, he shall be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race."—Robert Louis Stevenson.

By many the doctor is regarded as a species of the quack order, one who rejoices in the distressing circumstances of a patient who finds it necessary to seek his counsel and aid in serious sickness. It is a frequent comment on the part of the laymen that we promiscuously dispense "flour and soda."

Oftimes, when a doctor has worked honestly and faithfully (and sometimes without hope of pecuniary reward) tiding him over a grave crisis which obviously would have resulted in putting out his little spark of life had it not been for the intelligent and skilful attention of the physician, the patient will give the credit to some kind-hearted, ignorant old woman who perhaps prescribes a certain "yarb," which apparently causes a very speedy recovery, after the attending physician has intelligently treated the case and has removed the cause.

The doctor is usually too busy and has too much professional pride to enter into controversy, or attempt to overcome such erroneous impressions.

Of course, there are numerous unscrupulous quacks who, through gross misrepresentation of their alleged medical knowledge and therapeutic skill, rob thousands of poor, unfortunate, ignorant, misled sufferers of all their hard-earned money, leaving them at the mercy of charity; and, alas, there are many of high social standing, who pose as being intellectual and progressive in other matters, that permit themselves to be gulled into the patronizing of impostors possessing not a semblance of

medical knowledge but making all sorts of absurd claims.

The physician, himself, cannot be held entirely blameless for this state of affairs. As an illustration, consider the attitude of many physicians when consulted by a patient in the initial stages of pulmonary tuberculosis. Do they not frequently attempt to allay his anxiety by referring to the trouble as "bronchial disease" or a "slight cold on the lungs." intimating that it is in no respect of a serious nature?

I believe the physician makes this diagnosis for one of two reasons: he is either superficial in his examination and grossly careless in his methods of arriving at a diagnosis, or he purposely misleads his patient in order to afford him temporary satisfaction.

Is it to be wondered at, then, that this patient will lose faith in his regular physician when his cough grows worse and he gradually becomes weaker, day by day, with no prospects of relief, and in his dilemma turns to the patent-medicine man or some far-famed specialist who, in emblazoned and flamboyant type, announces to the world his discovery of an infallible cure for consumption?

Is it not pitiable to see these poor, emaciated, misguided consumptives, as they pass from one socalled specialist to another, patronizing the dispensing pharmacist, patent-medicine crook, mental-healer, etc., while they are being systematically robbed, not only of their money, but of that which is of infinitely more importance to them, i. e., an opportunity for recovery? This would really be amusing if it were not for the tragedy involved, the enormous death-rate due to a preventible and curable disease.

What can the doctor do to overcome this state of affairs? Simply this: Have a frank talk with those patients who present positive symptoms or symptoms strongly suggesting tuberculosis. Let him impress upon them in unmistakable and emphatic terms that they are facing a grave danger. They should not be allowed to leave the doctor's office thinking that they are merely suffering from a cold or slight catarrhal affection of the respiratory passages.

Once thoroughly convinced that they have consumption, take time to explain to them the nature of the disease and point out the false ideas that generally prevail regarding same. They should be earnestly advised that in the hands of honest and capable physicians consumption is a curable disease in a large majority of cases. The doctor who does this will save numerous lives, retain the confidence of his patients, add to his prestige, and prove himself of inestimable value to his community.

H. W. SMELTZER.

Greendale, Va.

A BAD CASE OF NOSTALGIA

'Mid pleasures and palaces, never content,
O give me my flapjacks of Portland cement!
With egg for my breakfast, an egg that was laid
The year that the Hay-Pauncefote treaty was made.
CHORUS:
Home, home, sweet, sweet home!
Be it ever so expensive there's no place like home.

How dear was my seven-room Englewood flat,
(Though others were ten dollars dearer than that),
Where odors of springtime, tho' feeble and scant,
Were strengthened by those from the rendering plant!
(CHORUS.)

How jocund I'd rise at day's earliest peep,
When Rafferty's rooster was murdering sleep,
And haste to my kitchen, delectable spot,
To give to my flies their matutinal swat!
(CHORUS.)

How lordly I'd order my grub from the store,
While grocers and butchers kowtowed at my door!
Blest days ere the middleman captured my goat
And forced me to feed at a table-dee-hote!
(CHORUS.)

An exile from home, pleasure dazzles in vain,
O give me my Battle Creek sawdust again!
O take all your parley-voo dishes away
And bring me familiar old shredded baked hay!
(CHORUS.)

FRANK L. ROSE.

Jackson, Mich.

ETHYL CHLORIDE. CARBUNCLES

The object of this article is to get some of the readers to tell their experience with ethyl chloride, the various uses to which they put it, whose make they use or prefer, and so on. In order to start the "ball to rolling," I will be the first and tell some of my own experience with it.

I first tried ethyl chloride about fifteen years ago. A drug salesman came to see me and I asked him what he had that he could recommend as a local anesthetic—I expecting to procure some preparation of cocaine. The agent said he had something that was ahead of cocaine, showing me a glass tube holding, I suppose, one hundred Grams. I had him send me a tube, and had I known more about the different containers, perhaps I could have managed better—at least got more service out of the investment, which was $1.50, I think.

I lanced one or two boils of small size with fairly "good feeling" to my patient. But my stuff went away too fast, the vent was too large to get a spray, it ran from the tube in a stream as large as a broom-straw, consequently I failed to get best results. Half of the first tube was lost on account of the valve leaking.

I buy from different makers from time to time, each manufacturer claiming to have the best product of ethyl chloride and best container. I tried another American make, as well as an imported article, the latter named "ethesea," put up in Switzerland. From one 50-Gram tube of the latter I got results all right, but after the tube was exhausted, I found my second one was empty. The rubber plug fitting over the vent had been dissolved and my ethyl chloride was gone.

Seeing an advertisement of a 100-Gram tube for one dollar, I sent and got it; by express it cost me $1.50. This was "antidolorine," made by a firm of that name in some town in New Jersey. This happened to be for general anesthesia, as stated on the container, and not wishing to use it for that, it has been useless to me, though it is a good article if the vent could be made small enough to spray instead of stream.

Sending to the same house again, this time for a 50-Gram tube, I was sent a 60-Gram container made by the Gebauer Chemical Company, Cleveland, Ohio. This cost me $1.25, which was 25 cents more than I had to pay to the manufacturers. I have been using Gebauer's make for two or three years, and have found it as nearly perfect as I expect to get.

This firm last named comes as near treating a man "white" as I can ask, and they guarantee against loss by leakage, if a few simple rules are followed. The ethyl chloride can be so regulated that you can stream it or spray it with a hissing sound that can be heard across a room. This stream can be perfectly regulated, and in using, when the spot upon which it is turned flashes white, you can get through the skin with a knife without causing pain, practically.

The technic is simple, but simple as it is, a man will find that familiarity by handling and learning how to regulate the screw, which way to turn instantly, is necessary, in order not to bungle. But this holds good as a rule in all things.

Now for the different operations for which I use it in giving a hypodermic to children, nervous women, and some cranky men. Occasionally I find someone who complains of the cold; they say it is burning.

I use it, for instance, for lancing all kinds of abscesses accessible with the spray. Or, when called on to reduce a strangulated hernia and slight taxis fails to push the knuckle of gut back, spraying with ethyl chloride will cause the gut to slip through the ring with but little manipulation; and frequently it pops back without taxis.

For destroying venereal warts it is invaluable. I have had some of the finest results with it for this purpose, generally making four operations where there is a good crop. In two or three cases I have used it to destroy the phagedenic condition in chancroids. Moles on the face will shrivel up and disappear if frozen two or three times.

If I wished to use the injection of carbolic acid in carbuncles, I certainly should utilize the spray to obtund sensibility first. But in treating those painful things I do not now inject, although I have done so several times. I find a sliver of wood covered with crystal carbolic acid all that is needed, and I have used it this way for twenty-five years. No anesthetic is needed, except the phenol itself. This method I explained in *The Medical World* for September, 1911, telling how I happened to adopt it, the experience being personal. I had been in hades for a week, without sleep, so I had my better-half mop out thoroughly the small slough, that had formed, with such a phenol-covered match. I got the first rest that I had managed to get for a week. (This "buncle" furnished me a memento in the form of a large scar on the back of my neck, cutting the muscle half in two.) The next morning it was cleaned out again with the carbolic match, and this was repeated several times each day until the entire induration was broken down and mopped out. My appetite came back in a day or two, and "Richard was himself again."

My youngest brother, Dr. Albert Brasfield, of Brazil, Tennessee, to whom I described the treatment twenty years ago, has treated more cases with this method perhaps than any man in this state. He first smears vaseline around on the outside skin, so that any excess or overflow will not blister, and with a probe covered with cotton and crystal phenol burns to the bottom and all sides of the induration in a short time. To any brother physician who has never tried this plan in a carbuncle, unless he positively knows that he has something better, I wish to say, Try it, and hear the fellows thank you—

but, while they still feel grateful collect your bills, unless you know your patients to be O. K., worth one hundred cents the dollar.

Some time in 1912 I had an article in CLINICAL MEDICINE on the use of sunshine for cauterizing suspicious growths—moles, epithelioma—where no glandular or systemic involvement existed.

Many letters reached me, asking for further light. All of these I answered except two, one from Dr. Campbell, of Watouga, Oklahoma, and one from a brother in Indiana, whose name I have forgotten. To these two I wish to apologize by telling them that about that time I was laid up for repairs from a kick by my horse, so the enclosed two cents was not deliberately stolen!

As to whoever tried the sunshine I don't know, except Dr. A. R. Hollman, who wrote me first for all I could give him—and elucidating the method. In the course of a month or two I received a card from Doctor Hollman, away down in the Republic of Mexico, thanking me and asking what he could do to show his appreciation. The method had saved a life, and a leg, I believe, the patient having gangrene, and the case being inoperable.

I kept thinking I would write Dr. Hollman, but have never done so. But I read with interest his last article in your CLINICAL MEDICINE. By the way, letters like his, Dr. Moody's, and Dr. Moss's are eve ry whit as enjoyable as when the subjects are pure medical "pabulum." Tell us more about that land of mysteries, Dr. Hollman—peculiarities of the greasers, and the dons. Do they have any dons there now?

Well, Dr. Burdick, perhaps I have said enough to worry you into sending this to the waste-basket. As I said to you, I like to feel, when writing to CLINICAL MEDICINE, that, by personating you, Waugh or Abbott, there is a living—oh, thunder, somebody that I am talking to, and not a bodiless, soulless corporation.

There are so many good men who write for CLINICAL MEDICINE that I feel like taking a back seat. The pictures occasionally published are such fine-looking specimens of manhood. They look so prosperous, and all that. Brother Waugh—who, by his writings, then was with *The Medical World*—first gave me a zest really to *study* medicine, though at that time (1887, I think) I had been in practice eight or ten years. By chance I got hold of a file of *The World* and soon after subscribed for it, taking it ever since, or reading it ever since. For one or two years I read it by exchanging with a brother physician; and, by the way, had I got a hold of the business talks which Taylor gives us, I might now be in much better shape than I am. I learned to look for anything that Dr. Waugh might have to say. I believe that I can pick up a journal, read a dozen lines, and if Waugh wrote it I will be be able to tell—something "Waughish" in his style.

I began reading THE CLINIC soon after it was started, and stayed with it for ten or more years, as a paid subscriber, rest of time read by exchange.

I will close now, hoping to hear from all who have had experience with ethyl chloride, as said before.

S. W. BRASFIELD.

Humboldt, Tenn.

SEE AMERICA FIRST

Seeing your editorial on page 1075, November (1912) CLINICAL MEDICINE, woke a responsive chord in my breast. "See America first" is my slogan, and I have seen a great deal of it west of the Great Lakes.

In 1900, I went to Alaska, spending eighteen months roaming over that vast territory, being known there as a "sourdough." Of course I joined the "Arctic Brotherhood."

Returning to the States, I visited Tacoma, Seattle, Portland, Spokane, and other cities, and finally secured a position with the Northern Pacific Railroad, at Livingston, in the train-dispatcher's office, as I am an expert telegraph operator. From there I had numerous chances to see the Yellowstone National Park and the surrounding country. Then I secured a position as chief operator at the Butte, Montana, Western Union office. Finally I returned to Chicago via Ogden and Omaha.

Four years ago I spent six weeks hunting in the Du Chesne River Valley, Utah, crossing the mountains on a pair of skis, with which I learned to be expert in the Klondike.

This fall I took another vacation, hunting in the Rocky Mountains of northeastern New Mexico, where I found grand old nature in all her beautiful handiwork. The memory of this last trip haunts me, and I should like to tell the rest of the "family" about the old Santa Fe trail, the old log house that Kit Carson lived in, the beautiful orchard of Mr. Chase, Kit Carson's and General Lew Wallace's friend; the old apple-tree standing in front of Mr. Chase's residence, that saw the commencement of the last chapter of Ben Hur; the beautiful roaring, trout-laden

Cimarron River; and the black-tailed deer roaming the primeval forests.

But space forbids. Suffice it to say—"See America First." Nothing more beautiful exists in the world, and there are many, many beautiful nooks and corners that human foot has not yet trodden nor eye yet beheld to stamp themselves upon the memory.

A. E. COLLYER.

Elgin, Nebr.

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[Can we not prevail upon Dr. Collyer to "go ahead" with his story? This is something we all are interested in. *You* ask him.—ED.]

THE TREATMENT OF INEBRIETY. A DRUNKARD'S FARM

It is no trouble at all to cure inebriety. Clean out, clean up, keep clean, and give bitter tonics for a week, and the patient is well. In the *cleaning-out* process, do not "send a boy to mill," but make a man's job of it. Calomel, podophyllin and bilein, in combination, one tablet every half hour till six are taken, followed by a saline laxative, does the business. This I repeat daily for three days. As soon as the bowels act give strychnine nitrate, gr. 1-64, and atropine sulphate, gr. 1-100, every three hours for three or four days.

From the first, give a bitter tonic. Compound tincture of cinchona, compound tincture of gentian, and fluid extract of cascara aromatica, equal parts, is as good as any.

This treatment will make a man absolutely free from the uncontrollable thirst. But the first time he has a business reverse, or a scrap with his wife, or a touch of grip or biliousness, he will go to the old sovereign remedy for every ill, and the first thing you know he is like "the dog that returns to his vomit or the sow to her wallow in the mire."

The above is like ancient history. Here is something new—*an inebriate farm.*

The city of Jacksonville, Florida, has purchased a section (640 acres) of land five miles out of the city. On one part of this city-farm will be located the inebriate farm. There were four thousand arrests for drunkenness in this city last year; but these arrests probably represent not more than one thousand individual inebriates. The plan is this:

When a drunkard is arrested, the municipal judge is to sentence him to this farm for a period of ninety days. When he gets there, he will be given the option either of going to the inebriate farm and taking the treatment, or else to go with the chain-gang and wear stripes. If a man takes the medicine and performs all the duties required for thirty days and the doctor and the superintendent are satisfied that he is cured, he will be paroled during good behavior. If he becomes intoxicated, he will be sent back for the remainder of the term.

The plan is, to give patients plenty of work to do—not slavish, exhausting labor, but enough to keep them busy. Employment at good, honest work is of as much importance as medicine.

Take an ordinary police-court "bum" who lives on free lunches and never takes a bath, and give him good, honest, sweat-producing work with ax or hoe, make him take a shower-bath every day, and feed him abundantly for thirty days with corn-bread and buttermilk, cow-peas and cabbage, and he will be a new creature. At the same time have safe and sane teachers visit these men and point out a better life. This will make good citizens of ninety percent of them. Such a farm will be self-supporting after the first year.

There should be a thousand such farms established. If CLINIC readers can tell me how to do it better, I shall feel obliged. This is all in the future. The "powers that be" have tentatively promised to do their part by the first of the year.

J. N. TAYLOR.

Jacksonville, Fla.

THE VARIABILITY OF TINCTURE OF DIGITALIS

Dr. Alexander Goodall calls attention to the great variability in the potency of different samples of tincture of digitalis and condemns the practice of prescribing the tincture, without precautions as to standardization, as unsafe. The risk incurred in prescribing such uncertain preparations has become sufficiently evident to have caused a demand for standardized products, and Doctor Goodall has investigated the potency of such preparations for a number of years.

The report of his findings, which he communicated to *The British Medical Journal* for April 20, shows that tincture of digitalis probably retains its full activity for one year, but that after that period deterioration of its potency is likely to take place to an important extent.

Nearly 50 percent of samples of digitalis tincture made by manufacturing chemists of repute showed, in the experience of the author, a departure from the average standard

of potency. The limits of this variation were from 275 percent over strength to 40 percent under strength; in other words, the effect of a dose of 10 minims might be that of 37 1-2 minims or that of 6 minims.

It is readily seen how extremely important it is, especially in view of the fact that some samples were found to be over strength, to be quite sure of the preparation of digitalis that is employed.

There is very little doubt but that almost as much harm has been done by digitalis improperly administered as benefit was accomplished by suitable doses given in suitable strength. Pharmacologists the world over are working hard to prepare the best possible preparations, which shall embody the full therapeutic virtues of this truly wonderful drug.

CHICAGO MEDICAL STANDARDS AS SEEN BY GERMAN DOCTORS

Among the newspaper articles and reviews published by the Chicago daily newspapers during the visit of the German physicians to this city was one entitled "Doctor His Sees Lack of Standardization in Medical Colleges of this Country."

It is to be hoped that this article did not correctly represent the views of Doctor His and his worthy colleagues, for it embodied an exceedingly ill-judged and precipitate opinion of the state of medical education in the United States, and in Chicago especially. Such an opinion, if our German friends really held and expressed it, must have been based upon the content of the Rockefeller Institute Report, the distorted data and biased conclusions of which have already received their full share of criticism from those who are in a position to know the real facts.

Clothes do not make the man. On the contrary, the man gives character and personality to the clothes. By the same token, the label or name attached to a medical college does not necessarily indicate its real status as an educational institution; but the student-body and the work done determine its place and value. Judging from the newspaper article quoted (which we again venture to hope is as incorrect as most newspaper interviews are), Dr. His and his colleagues were obsessed with the idea that, having visited Rush Medical College, they had exhausted their inspection of medical education in Chicago, and, after making a perfunctory call upon one or two of our hospitals and a few of our most distinguished practitioners, it was then in order to consult their watches and see whether time permitted a trip to the stockyards.

I take this opportunity of informing our German colleagues, if it be not too late, that Chicago is proud in the possession of several excellent and reputable medical colleges which furnish a living demonstration of the truth that institutions of scientific learning do not necessarily require acres of land or innumerable stone edifices in order to give to the world men of ability and worth. It is both interesting and gratifying to know that the medical Baedeckers list our own Dr. J. B. Murphy, and the school in which he teaches, among the worth-while sights of Chicago. But this great man himself, be it remembered, is the product of one of those lesser lights among medical educational institutions to which our *soi-disant* censors of medical education give but a minor place; and the same thing is true of many of our ablest and most distinguished physicians.

The fact is, that in the last analysis all of our medical colleges are practically alike—all of our reputable colleges, I mean, of course. This may seem like a very broad statement to make, but it is not an exaggeration. The ranking of one man higher than another does not depend upon his school, but upon his own individual capacity and resources. The sign of a college or a university can not make an efficient practitioner. Dr. His and his colleagues should understand—and the American public should understand also—that a conscientious, painstaking, cultured man can and will give a good account of himself, no matter which of these schools he may have attended, or what its status in a partial and prejudiced report, such as that given us by Mr. Flexner.

There could never be technical uniformity among our medical colleges unless the entire system of medical education were administered by the Government—a state of affairs to which the American people are not yet ready to submit. Nor, in the opinion of most of us, is such uniformity desirable. It would unquestionably lower, instead of raising, the general average of efficiency. Democracy and freedom, in science no less than in politics and economics, are the surest pledges of progress and achievement. The writer desires to assure our German visitors that under these conditions our medical colleges, irrespective of name, location, or wealth of improved real estate, are turning out an adequate body of medical men of whom both public and profession are, and may well be, justly proud.

There is no intention in this little preachment of reflecting upon any institution of medical learning that may have been referred to, directly or indirectly, or upon any of its graduates. Therefore, let no one take offense. It is but an earnest plea for broadermindedness, and a protest against the tendency, which seems to be growing among a certain class, to misrepresent and lower our own standards. I owe an apology to the readers of this journal for dwelling so long upon the topic—my excuse must be that it is a subject in which all are, or surely should be, concerned.

RAOUL L. VIORAN.

Chicago, Ill.

VINEGAR FOR HOT-PACK SWEATING

In the course of the last five or six years, I have fallen into the habit, as one of the best means of elimination in acute diseases, of sweating patients freely when seen within twenty-four or forty-eight hours of the onset of seizure, doing this before cleaning out the alimentary canal, and employing what may be styled acid-steam sweating, by the following method. Procure six or eight ordinary bricks and, after heating thoroughly in an oven or a stove, place them in a large pan containing one quart of boiling vinegar. Then remove from the stove, wrap the wet bricks in folds of any woolen fabric previously saturated with the remaining hot vinegar without wringing the cloths. In placing these bricks about the patient, be careful, of course, not to allow them to come in contact with the patient's skin. They are easily arranged, but the nurse should slip her hands from time to time under the thick blanket coverings to see that everything is held in place, so as to prevent accidental scalding.

After the patient is well wrapped, raise his head and administer half a pint (at least) of hot drink—lemonade or water with a little wine or a small teaspoonful of tincture of capsicum. In the course of half an hour most profuse sweating takes place—streams of it—and this should be allowed to continue for not less than two hours. It is astonishing how rapidly the pulse and temperature go down under this simple procedure. Ordinary sweating by hot-packs will not give the satisfactory results arising from the use of vinegar in the manner here described. I am inclined to think there must be some peculiar property in the acetic acid which so freely opens the skin-pores.

In all acute ailments, in the early stages—including typhoid fever, pneumonia, scarlet fever, measles, mumps; also in convulsive seizures, such as eclampsia and hysteria—the relaxing power of this method, along with the elimination, can always be relied on. A few cases from experience may illustrate this truth.

The first case is that of a man, aged 24, in the first stage of typhoid fever, as diagnosed. He lived in a settlement where several cases of the fever had broken out, with one death, during my absence from home. The time was in late autumn. The man had been ill two days with chills, headache, backache, high fever, restlessness, etc., and the attack threatened to be a pretty severe one.

I at once instituted acetic-vapor sweating as described, and when I left his pulse and temperature were declining and headache subsiding. The following day found considerable improvement, he having had a fair night's sleep; but, as he was a pretty robust subject, I repeated the sweating at my visit the following day. Two days later he was on the road to convalescence. Pulse and temperature were about normal. Discharged him, advising light diet for a few days and confinement to his room.

Number two was an infant of ten months, sick two days. Symptoms: Congestion and râles throughout both lungs; high fever; tight cough; great difficulty in breathing; apparently in much pain, and very restless. I sweated the child (using small pieces of brick) for two hours. Next day it was able to take a little nourishment. No further treatment was given, beyond a few drops, four or five times a day, of an expectorant elixir. Had no occasion to make another visit.

Two children, 4 and 5 1-2 years, respectively strayed into some fields near their home, being absent only a short time. On their return, they suddenly became unconscious, could not be aroused, and shortly after went into convulsions. On my arrival, I hastened to carry out the sweating process. While the bricks were being prepared I gave them each a pretty full dose of atropine, hypodermically, in order to control the convulsions sufficiently to introduce into their mouths good doses of calomel, dry, on the tongue; this being accomplished with difficulty in the midst of tonic and clonic spasms. After being under profuse sweating for about one hour, they both suddenly opened their eyes and gazed around in apparent wonderment, at first speechless, but a few moments later uttered a few words. The convulsions now were rapidly subsiding, but I kept up the "pack" another hour, and before I left both were able to talk rationally.

A word as to the trouble. Both children, we surmised, must have been eating some poisonous herb and, in fact, a few days later the father informed me he had discovered some wild parsnip, said to be poisonous, growing nearby.

Before resorting to the atropine hypodermics, it might have been thought desirable to produce emesis with apomorphine; but, on account of the most violent convulsions, tonic and clonic, such as I never before witnessed, and spasms of the throat, the emetic action of the drug might have choked or strangled the little patients.

There is, of course, no intention of offering this method of treatment as a means of aborting acute inflammatory and infectious diseases; but only of modifying and shortening their course. And for this purpose it has proven itself invaluable.

A. H. CHANDLER.

Cocagne, N. B., Canada.

DIAGNOSIS OF DUODENAL ULCER

When a patient complains of persistent distress from one to two hours after eating, with recurring attacks relieved by food, and vomiting and hyperacidity absent, a diagnosis of chronic duodenal ulcer can be made with considerable confidence.

The matter of recurring attacks is important. In almost every case there will occur complete relief of symptoms, but only for a time, varying from a month to several years.

This periodicity explains many medical cures, and it led one surgeon to say that he never operated for ulcer until it had been cured nine times by medical means.—E. R. McGuire, *Buffalo Med. Jour.*, 1912, June.

OCCIPUT-POSTERIOR PRESENTATION

I am convinced that the occurrence of this malposition is one of the most common causes of maternal injury and fetal death. I am also sure that a large percentage of these cases are not recognized as such until the face appears under the pubic arch. Further, a diagnosis is often impossible if we use only the classical method of palpating the sutures and fontanelles. When the scalp is completely edematous and the cranial bones are pressed together and overlapping, only the most consummate expert can make out the landmarks.

In cases of this kind, when the occiput has not entered the hollow of the sacrum, it may be necessary to put the entire hand into the womb and locate the chin or occiput before applying forceps.

For myself, I never allow these presentations to remain so, as I find that correction is always possible. By grasping a shoulder or even a hip, the fetus can be rotated on its long axis so that the anteroposterior cranial diameter is shifted through 180 degrees, and a R. O. P. presentation is changed to a L. O. A. This accomplished, the case may be left to the natural forces, or, as I prefer, delivered by the forceps, where there is no contraindication and where the corrected presentation engages readily in the pelvis. In this way we can give a uterine douche at once (which I always prefer to do after the entrance of the hand, no matter how aseptic) into the uterus. Certainly there is nothing original in this maneuver, as it has often been suggested, but I have seldom seen others attempt it.

The advice given in some of the textbooks, to wait and hope for a natural rotation, appears to me pernicious. It commonly exhausts the patient uselessly. If, however, the woman has sufficient strength to force the occiput into the hollow of the sacrum, it is impossible to reach a shoulder. In this event, it is usually possible to rotate the occiput into the anterior position with the forceps without using undue force, in spite of what textbooks say. I refer, however, only to those cases in which the child has been driven down by the natural uterine contractions. When the head has been dragged into the pelvis in a posterior position, by the use of all force at the command of the operator—perhaps 250 pounds—then further attempts at instrumental rotation might not be safe to the maternal structures. These are the cases of perinea torn through the sphincter, of paralyzed bladders, lacerated cervices, prolapsed uteri, infective peritonitis, and fetal heads mangled beyond recognition.

These accidents are the more deplorable because they are absolutely preventable. The position should have been corrected. It is no excuse to deprecate a possible symphysiotomy or cesarean section as an alternative, since with the average pelvis these can be ruled out entirely.

Occiput-posterior positions almost always require artificial aid. I have seen delivery, spontaneously, in rare instances, and have also seen spontaneous rotation. These exceptions have not encouraged me to hope for them, as a general rule. Formerly I applied forceps in the uncorrected position, hoping for the rotation that the books said might occur. I con-

fess also that some I failed to diagnose. I have delivered some, indeed many, with apparently little damage either to mother or child. I am also positive that I have lost some whom I could have saved by correcting the malposition.

How often do these posterior positions occur? It is impossible for me to make a reliable estimate. I have had as many as three in direct succession, and know that they keep appearing at frequent intervals, perhaps, with me, one in every six or seven deliveries. I realize that they occur often enough to be a very serious factor in dystocia and fetal mortality.

H. O. CARRINGTON.

New York City.

PHILADELPHIA JOURNAL OF PHYSIOLOGICAL THERAPEUTICS

Last month an unfortunate error occurred in a reference to the Pennsylvania Orthopedic Institute and School of Mechano-Therapy, in the Business and News Notes Department. In that item we referred to Dr. Walter as editor of *The Philadelphia Journal of Physiological Therapeutics*. This was a blunder. The editor is our good friend Dr. Louis von Cotzhausen, southwest corner 24th and Parrish Streets, Philadelphia, Pa. This is a strictly scientific journal. Indeed, there is so much of scientific interest in every number of this publication that we have come to look upon it as a reliable source of information in the special branches of therapy with which it is concerned.

SOME FACTS ABOUT SINKINA

In an editorial in the October number of CLINICAL MEDICINE (page 987), under the heading "Another Wonderful Discovery," we referred to the remarkable claims made by the manufacturers of sinkina concerning the efficacy of that preparation in the treatment of malaria.

Being somewhat prejudiced by the literature which the manufacturers were sending out, and the unusual claims made therein, without investigation we treated their claims for the remedy in a somewhat skeptical and sarcastic manner.

The Metropolitan Pharmacal Company, located at 128 Maiden Lane, New York, has taken exception to our editorial, and has furnished us with some interesting facts, which we are glad to present to our readers for what they are worth.

First.—Instead of being a play upon the word "cinchona," as one might naturally assume, the word sinkina is coined from the word "sin," meaning *without*, and "kina," meaning *quinine*, thus presumably conveying the idea that sinkina is without quinine.

Second.—The preparation, we are informed, was actually brought to this country by a gentleman "who for more than twelve years was the honored foreign representative of one of the oldest, largest and most reputable manufacturing chemists in the world. While in Asia he ran across a secret native remedy for malaria, the formula of which he purchased."

Third.—Sinkina, we are assured, is the product of "Cuminum sinensis," a hitherto unknown plant found growing in Yunnan, China, and contains no drug hitherto known to materia medica or therapeutics. The therapeutic properties of the plant are incorporated in an agreeable elixir.

Fourth.—While the active principle of "Cuminum sinensis" has not as yet been fully determined, it "would appear to be an aromatic aldehydic or phenolic substance." Eminent scientists, however, we are told, are engaged in making a searching analytical and physiological investigation of the drug, and their report will doubtless be available soon.

Fifth.—The Metropolitan Pharmacal Company states that specimens of the seeds of the plant "Cuminum sinensis" have been submitted to the Bureau of Plant Industry, Department of Agriculture, Washington, D. C., who have promised to report upon it as soon as they can produce a plant in foliage and flower.

Sixth.—The manufacturers also state that "sinkina possesses the remarkable property of quickly and completely eliminating every evidence of the haematozoa of paludism from the blood, doing so without any of the objectionable idiosyncrasies of quinine, while building up damaged corpuscles."

Seventh.—It is also stated that the therapeutic properties of the remedy have been thoroughly demonstrated in the Orient, the Roman Campagna, and in the United States. The Metropolitan Pharmacal Co. has submitted to us a number of reports of clinical tests made with the remedy in the governmental hospitals of Italy, as well as from a number of American physicians attesting its therapeutic value in the treatment of malaria.

Eighth.—We are also informed that the preparation has been submitted to the members of the special commission appointed

by the Southern Medical Association for the study and prevention of malaria, and to the Council on Pharmacy and Chemistry of the American Medical Association for inclusion in "New and Nonofficial Remedies."

While we believe that the character of our editorial was justified by the most unusual statements made regarding this remedy, still we are very glad indeed to put the facts, as presented to us by the Metropolitan Pharmacal Company, before the readers of CLINICAL MEDICINE.

If a new and effective remedy for malaria has really been found, we shall all be glad to know it. It is, we believe, unfortunate, however, that an undignified and misleading name was selected for the product and that the literature first presented was of such an unscientific character. We shall be glad to learn more about this product as the investigations concerning it are continued, and it will give us much pleasure to present any facts concerning it (and we trust these facts may all be favorable) to the readers of this journal.

THE CODEINE-HABIT AND EROTICS

In the last October issue of CLINICAL MEDICINE there appeared an interesting article on codeine. The doctor, a French physician, claims for it that it is hardly known to produce a habit. One of the editors, commenting upon this, very sensibly asserts that codeine most assuredly is a habit-forming drug. However rare, I can well conceive that there may be such cases. For anything or any procedure which produces the "charm of euphoria" may be too often indulged. The act of copulation is a physiologic habit often too frequently repeated by the newly married, and often indulged even in advanced pregnancy.

To the latter habitué, the footnote on Parvin's "Obstetrics" should be read. As a punishment for such an outrageous act the man was, by the ancient Arians, compelled to kill one thousand lizards and one thousand snakes and build one thousand bridges over running water, etc. This would also seem to be a retribution on the snake which suggested the habit to Adam and Eve.

I have lately treated a case of morphine-habit combined with codeine. The patient was intelligent and the manager of a hotel in one of our northern states, but I much regret that I was requested not to enter the history of his case. This was the second time that he was under treatment in the same institution, but whether or not codeine entered into the case the first time I do not know. My experience in an institution for drug-habits is to the effect that morphine or whisky starts a habit, and then heroin, codeine, and such-like drugs quite often complicate. It is most probable that owing to the more strenuous life in the United States drugs are more resorted to than in Europe, and the "Hague Conference this year could not decide whether or not codeine is a habit-forming drug." (Charles B. Towns.) My experience in public work and in a hospital for tuberculosis has been that heroin is much more satisfactory in the cough of phthisis than codeine.

THOMAS R. EVANS.

Shelbyville, Ind.

A LESSON FROM THE ATTEMPTED ASSASSINATION OF COLONEL ROOSEVELT

I beg to call your attention to a plan designed to lessen or prevent crime and other antisocial acts, especially such as the attempted assassination of Theodore Roosevelt. I shall be very grateful for the honor of your editorial aid.

For many years I have been advocating in Congress, and in state legislatures and presenting to mayors of large cities the plan herein outlined, which, in brief, is to establish laboratories or bureaus for the scientific investigation of criminals and other dangerous abnormals. I believe that every large city, every state, and especially the federal government should have such a laboratory.

When anyone sends to the president, the governor, the mayor, or to any prominent citizen threatening letters, or repeatedly utters threatening words, or attempts to injure such officials, or is unreasonably insistent in demanding to see them personally, such individuals should be detained at least a few hours and thoroughly studied by scientific experts in criminal anthropology, psychophysics, and social pathology.

By patient study of dangerous, unbalanced, and often illusioned persons, who may be called mattoids, their eccentricities and peculiar behavior can be determined to such an extent that we may detect them in advance. At present it is almost impossible to do this, because of little or no knowledge concerning them being possessed; and this ignorance is due to want of systematic, scientific, and sociologic investigation.

Millions of dollars are annually expended by our government for the scientific investi-

gation of the antecedents, peculiarities, and behavior of some little bacillus causing the death of plants or animals, but little or nothing is given for a similar study of the larger human "bacillus" that has caused this country to suffer losses beyond calculation.

Who can estimate the injury and cost to the United States of the assassination of Garfield and McKinley? Shall we wait till more presidents, governors, mayors or other distinguished citizens lose their lives at the hands of assassins before we begin a systematic study of dangerous individuals of this type?

ARTHUR MACDONALD.

Washington, D. C.

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[We understand that a bill covering the ground suggested by Mr. MacDonald has been introduced in the Senate by Senator Sutherland, and a similar bill in the House by Representative Graham of Illinois. These bills are pending before the Judiciary Committees of both houses. If you are interested (as you should be) make your influence felt with your legislative representatives.—ED.]

WANTED: BACK NUMBERS OF "THE MEDICAL COUNCIL"

In our library-file the January and April numbers of *The Medical Council* 1910, are missing. Should any of the readers of CLINICAL MEDICINE happen to be in possession of the numbers mentioned and are willing to part with them for the benefit of our library, they will confer a great favor by informing us per postal card, or kindly mailing them. Address: The Librarian, The American Journal of Clinical Medicine, Ravenswood Station, Chicago.

ANOTHER "LITTER"—QUADRUPLETS

The matter of quintuplets written about in the September issue of THE AMERICAN JOURNAL OF CLINICAL MEDICINE (see page 958) calls to mind the fact that here in Massachusetts we are making quite a lot of talk about quadruplets born to Mrs. Thomas H. Seely, of Dorchester, at the Dorchester Cottage Hospital, August 5, 1912. On September 14 they were all living and apparently in good health, for they were removed from the cottage hospital to St. Mary's Infant Asylum, Jerome Street, Dorchester.

The mother was left under the impression for several days that she had given birth to twins; the babies being taken to her two at a time. They were perfectly quiet at the hospital for four days after birth (having been at once placed in an incubator), but then they commenced to cry.

They are tagged and numbered, not having been named yet. Number 4 is the heaviest weighing 5 pounds, 4 ounces; number 1 is next, weighing 4 pounds, 10 ounces; number 2 weighs 4 pounds, 4 ounces; and number 3 weighs only 4 pounds, 3 ounces.

A Boston newspaper had the city birth-records examined after the babies were a few weeks old, and found a record of quadruplets born in Charlestown in 1910, but all died within a short time of birth.

LAURENCE F. KEITH.

Wareham, Mass.

BACTERINS IN PUERPERAL SEPTICEMIA

In the London *Lancet* for February 10, 1912, D. G. T. Western presents a careful and instructive study of 100 cases of puerperal septicemia in 56 of which the patients were treated by bacterins. The details of this paper should be read in the original. The patients had all been confined in their own homes, often under the most unfavorable sanitary conditions; they had been attended either by midwives or by physicians.

Of the 100 cases, 25 followed miscarriage, which in two instances was found to have been criminally induced. The onset occurred usually in two or three days, and the author found that the more fatal cases had usually set in on the second day; which suggests that the more virulent the infection, the more rapid will be the onset and the more fatal the result.

In the blood-cultures, streptococci were found most frequently. In a few cases staphylococcus aureus was found.

In 56 of the 100 patients, bacterins were employed for the purpose of active immunization. It may be said in passing that in 18 cases in which antistreptococcus serum was given, either in conjunction with or without bacterins, the serum did not appear to have any marked effect in lowering the temperature or in improving the condition. Sometimes, indeed, the action of the serum appeared to be distinctly unfavorable.

As to the bacterins, the author concluded from his results that these were most favorable in those cases in which he had employed an autogenous vaccine. Some patients who had shown no results whatever on treatment with stock bacterins responded promptly to the administration of an autogenous preparation.

Of the 56 patients treated with bacterins, 18 died; which gives a mortality of 32 percent; while, of 44 untreated patients, 24, or 56 percent, died. Unfortunately the two groups cannot be compared strictly, because the untreated cases included several which were extremely severe and in which death occurred before specific treatment could be administered, and they also included a number of very mild cases in which specific treatment did not seem called for.

If we consider 27 cases in which the blood-cultures had been positive, we find in these a mortality of 52 percent (14 deaths), in 6 of which only a single dose of bacterin had been administered within twenty-four hours of death. On the other hand, among 15 patients with positive blood findings which had not been treated with bacterins, 14, or 87.5 percent, died; and, if we confine ourselves to streptococcal cases, we find that 12 out of 13 untreated patients died—giving a mortality of 92 percent.

From these figures it appears that treatment by inoculation with bacteria in this series of cases had reduced the mortality by 30 to 40 percent.

We have reproduced the mortality figures of the author, although statistical investigations are rather difficult and involved to those who are not accustomed to them. We can conclude, however, from the results of Dr. Western's interesting article, that in acute cases of puerperal fever treated according to old methods the mortality is extremely high and that this has been reduced by from 30 to 40 percent by the administration of specific bacterins, of which autogenous preparations produced better results. These results are important, and they show again the immense possibilities of the biological treatment of infectious diseases.

THE CORSET NOT A PROPER THERAPEUTIC AGENT

Is the medical profession experiencing a change of heart? After centuries of intense opposition to corsets, are the physicians and the corsetière to clasp hands, and is the decried garment to be accepted as a prized therapeutic agent? It might seem so from views presented first by Dr. Arbuthnot Lane in the London *Lancet* for Nov. 13, 1909, and among others by Dr. A. S. Gray in CLINICAL MEDICINE for December, 1911.

Briefly their arguments are: Man was originally an animal who walked on all fours; his change to an upright carriage involved a changed relation of the abdominal viscera to the force of gravitation, and a tendency of these organs to drop out of position, with consequent derangement of function; the provisions of nature to counteract this new danger have been slowly made and are not yet complete; in the meantime there is need of artificial and external means to counteract this tendency to enteroptosis; and, it now is claimed, such means are found in the properly constructed corset.

This is an application of the doctrine of evolution quite startling in its suggestions. How many other of the ills that flesh is heir to may be due to that "fall upward" when man abandoned the use of his fore limbs for purposes of locomotion? Are the abdominal viscera the only organs that have been subjected to undue strain by the changed relation of their axes to mother earth? Ought not other parts to be carefully trussed up to avoid possible injury? Or, better, would it not be wise for the human animal to reverse as much as possible his anatomical lapse and return to quadrupedal locomotion?

Of course the new doctrine concerns especially the male sex, as the female, at least in civilized lands, seems to be fairly well supplied with the newly discovered therapeutic agent. It is a recommendation to all men to assume this garment which has been so distinctly feminine. It might be well for manufacturers of corsets, from humanitarian as well as business considerations, to send out some reprints of these valuable articles to uncivilized lands. Doubtless lady missionaries would prove valuable agents for the dissemination of the new gospel of the corset among the benighted women of these benighted lands. But just at this point Dr. Gray's reasoning is a trifle obscure. He says: "Investigation among the uncivilized races shows, under normal conditions with them, an almost complete absence of these abnormal physical conditions that cause so much distress to the civilized individual."

The evils, then, of man's adoption of the upright position are not universal, but are practically confined to civilized peoples. Are we to understand that uncivilized man has not made as much progress in bipedal locomotion as the civilized and so has not experienced its evil consequences? Or did those races now uncivilized make the transition first, so that nature has had a longer time in which to provide the needful compensatory organs and devices?

Dr. Arbuthnot Lane suggests another reason for the more favorable condition of uncivilized

man, namely, civilized man's habit of sitting. Savages squat, and so during a part of the day relieve the downward drag of the abdominal viscera by the upward pressure of the legs. From this it would seem that the cause of the prevalent evil of enteroptosis is not man's upright posture, but the deadly chair, and that the simplest therapeutic agency would be a return to the squatting habit of the chairless and cheerless savage. The corset is of value only till the deplorable mistake of civilization can be remedied—until the sinful chair is routed.

But Dr. Gray disturbs us yet more in this course of reasoning, for he says: "It is stated by good authorities and very conclusively proven that more than fifty percent of the women, and a very considerable percentage of the men, are suffering from enteroptosis." He implies, what I believe is well known, that women are suffering far more than men from this abnormality. And, yet, women are those who, not by reasoning, but by an "instinct" now (according to these gentlemen) proved to be correct, have provided themselves with this therapeutic agent recommended by Doctors Lane and Gray.

It would seem, then, that the instinctively discovered remedy has heightened the disease. And Dr. Gray does assure us that "the garment . . . until in very recent years, has been a most injurious appliance, productive of vast harm to the human race." His Figure 4 shows the most certain device conceivable for the production of enteroptosis; and when it is remembered that the garment depicted has been worn by civilized women for centuries, it seems needless to look further for causes of enteroptosis in those women, or, remembering the influence of heredity, in their sons. But what of the "instinct" that has led women to retain this "most injurious appliance"?

Rejecting this monstrosity, Dr. Gray furnishes in Figure 3 an illustration of what he thinks would be a valuable therapeutic appliance to counteract the pathologic condition he describes. But it is not a corset at all. It is a simple abdominal band. The corset is an entirely different garment. It differs by extension upward over a part of the trunk not involved in the conditions he bewails, and where it can have no possible beneficial effect. It differs further by the addition of perpendicular bones or steels. The essential question is, What is the relation of these bones to enteroptosis?

Suppose we imagine a garment constructed exactly according to the requirements of the therapeutic corset as given by Dr. Lane, Dr. Gray, Mr. Heather Bigg, and others. We will assume that there is absolutely no compression of the waist or thorax (though as long as women wear laced garments around their waists it will be absolutely impossible entirely to exorcise the demon of the wasp waist). These bones are adjusted to the body in the upright posture.

What now happens the moment the body bends forward? Every bone becomes a lever. The pressure outward and downward upon the upper end becomes a pressure inward and downward toward the lower end. Whatever possible beneficial effect might be produced by the skirt of the corset as a mere band is more than counteracted by the action of these levers, and there is an inevitable return toward the condition depicted in Figure 3. Test the pressure under the lower part of the corset by the manometer or even by the hand. Watch a company of schoolgirls—if you can find one where there is no waist compression—as they bend over their desks at their tasks. How is it possible to avoid enteroptosis under such conditions?

There is another question to be asked. What is the effect of substituting artificial contrivances for natural organs and processes in the normal body? There is danger of dislocated ankles with man's present mode of locomotion. Will you discontinue the use of the ankles and substitute crutches? From a variety of causes there is danger of constipation. Will you, as a regular thing, substitute cathartics for natural movements? By Dr. Gray's confession, the vast majority of the human race get on very well with the intraabdominal supports furnished by nature. Shall they be relieved by the substitution of artificial external devices? If there be danger of their proving inadequate, is not the whole drift of medical science toward the strengthening of the natural organs rather than to favor their atrophy through disuse? Who will deny this?

The question of therapeutic measures in pathologic conditions is something quite different, but it is difficult to see how even there the corset, as distinguished from the abdominal band, can ever be of service. This machine was created by base women for base purposes. The only instinct back of its perpetuation is the instinct of fashion. Just now, when the movement toward the emancipation of women from this disastrous thralldom is acquiring such momentum, it is peculiarly unfortunate to find members of the medical profession bolstering up the

dying cause of the corset with specious arguments.

W. H. WALKER.

South Haven, Mich.

FRIEDMANN'S NEW TUBERCULOSIS PREPARATION

It has been said that the illiteracy of the entire United States is about 10 percent, whereas the illiteracy of Maryland is about 11 percent (see the literature given out by the world in Baltimore). If these statistics are true, it is a foregone conclusion that the editor of the following clipping is a typical Marylander, and most likely a resident of the principal city of the state that has more illiteracy than all of the rest of the United States combined. The clipping cites Dr. Friedmann as follows:

"The serum, originally produced from turtles, is easily used. One injection usually drives all signs of tuberculosis from the system. Not only that, but it immunizes against tuberculosis as vaccination does against smallpox. Cures come within a few weeks. Of course, lung tissue that is gone cannot be replaced, but all of the germs within the body are destroyed, the wounds in the lungs heal and all fever disappears. My method is to inject the serum."

I do not believe that turtle serum has any very great selective germicidal power for the tubercle bacillus, protected as it is by its membrane of cellulose, against drying and the entrance of stains, etc. Yet I am not in a position to state whether or not turtle's blood has the necessary penetrating lethal power, and would like to hear from those who are informed, or who have carried their researches into this particular field.

L. B. EVANS.

Baltimore, Md.

[It is altogether too early to pronounce a positive opinion concerning this latest "cure" for tuberculosis which has been announced to us from abroad and for which the newspapers claim the impossible. In all the absurd write-ups from the lay press which have come to the writer's desk in the course of the last two weeks, there are not five which counsel caution in any expectation that may be raised by Dr. Friedmann's announcement. Some of them put claims and assertions in his mouth which no physician could ever be guilty of.

The principal objections which may be raised against the remedy are:

1. That its value has not been demonstrated sufficiently by animal experiments. It appeared in the discussion of Dr. Friedmann's paper, that guinea pigs which had been immunized against a virulent tuberculous infection by Friedmann's remedy lived about four times as long as did the controls. If we compare with this the results of an American physician who announced a prophylactic remedy for immunization against tuberculosis last May (von Ruck, *Jour. A. M. A.*, 1912, May 18; *Medical Record*, 1912, Aug. 31), we are at once struck with the fact that his immunized animals entirely resisted a virulent tuberculous infection to which the controls succumbed in the course of 40 days. According to a recent personal communication to the writer, Dr. von Ruck's immunized animals have now been kept under observation for over one year and show absolutely no signs of tuberculosis.

2. Dr. Friedmann does not appear to have supplied the proof that the injection of his remedy increases the specific antibodies against the tubercle bacillus, such as agglutinins, precipitins, specific amboceptor, opsonins, which have come to be looked upon as an index of the resistance of a tuberculous organism. These antibodies were increased promptly in the children and adults immunized by Dr. von Ruck with his remedy and went parallel with the clinical improvement that was manifest in his patients.

Finally, although Dr. Friedmann has employed piscine (turtle) tubercle bacilli, and although he believes he has reduced their virulence decidedly by a certain method of subcultivation, we must condemn *a priori* any remedy whatever in which living tubercle bacilli are introduced into the organism of young children for the purpose of immunization or for the purpose of curative treatment. This point was brought out in the discussion in the Berlin Medical Society, especially by such men as Citron and Klemperer, and would in itself suffice to throw the remedy out of court without any further discussion.

The writer admits that this very strong assertion is debatable, but he is firmly convinced that the introduction into the body of living tubercle bacilli, no matter how attenuated, no matter how subcultured, is undesirable. It has been shown definitely that it is possible to obtain the desired end by the introduction of killed tubercle bacilli or bacillary substances (extractives), and it would be foolhardy, to say the least, to run any risk whatever of infecting the little children whom we desire to protect.—ED.]

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, A. M., M. D.

THERE is no doubt that immediately subsequent to the discovery of American tobacco, it spread all over the world and its employment by Sir Walter Raleigh made it peculiarly fashionable in the British Isles. Still, the Romans and Irish employed pipes for smoking long ere the Christian era, but the dried leaves of aromatic plants were smoked, not tobacco! The English (as a carving at Stratford upon Avon demonstrates) had done the same long before Columbus discovered America. Botanic evidence demonstrates that tobacco was indigenous in China and Western Asia. Tobacco has been cultivated and used along the Yang-tse-Kiang from time immemorial. Tobacco from the East hence probably encountered tobacco from the West.

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At first tobacco, like strongly alcoholic substances, was regarded as a medicinal preparation and its sale confined to apothecary shops. In America it had a quasi-religious function, whence its use in peace ceremonies. The typical effects of tobacco occur as a rule after long continued use, sometimes not until twenty years or more. While many smokers reach old age, many fail to live to be old because they are smokers. The skin itches and becomes red, the nerves of taste are blunted, and patches develop in the throat; there is loss of appetite, epigastric fulness, pain and vomiting; and disturbances of the bowel function are common.

In women, menstrual disturbances may occur. In female cigarmakers, abortions are frequent. The sexual appetite is impaired and sometimes sterility and impotence occur. Disturbed heart action, palpitation, rapid and intermitting pulse, precordial anxiety, weakness, faintness and collapse, with sclerosis of the coronary arteries and left ventricular hypertrophy, are of common observation. Cigars and cigarettes produce irritation of the nasal mucous membrane, diminished olfactory sensibility, chronic hyperemia of the epiglottis and larynx, sometimes even of the trachea and bronchi. Bilateral nicotine amblyopia is common, with central disturbance of the field of vision, a central horizontal elliptical scotoma for red and green, sometimes also of blue in a lesser degree. Often there is swelling of the auditory tubes and tympanic congestion, with paresis of the auditory nerves and its consequences, such as noises in the ear.

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The central nervous functions are also affected. In the higher schools non-smokers get on better than smokers. Children from nine to fifteen years of age who smoke show less intelligence, developing laziness and a craving for strong drink. Adults are liable to cephalic pressure, insomnia or its converse (sleepiness), depression, apathy, aversion for work and dizziness. There may also be ataxic symptoms, paretic weakness of the sphincters, trembling and spasms. Nicotine psychoses rarely affect smokers, occurring more commonly in snuffers and still oftener in chewers. The prodromal stage which lasts about three months, shows general uneasiness, restlessness, anxiety, sleeplessness and mental depression of a religious type. After this follow precordial anxiety and finally the psychoses proper, consisting of three stages: (1) Hallucinations of all the senses, suicidal impulses, depression, attacks of fright with tendency to violent insomnia. (2) Exhilaration, slight maniacal exaltation, agreeable hallucinations; after from two to four weeks relaxation occurs again, followed by a hypomaniac state. The intervals between exaltation and depression diminish, the patient become irritable but elsewise not alive to his surroundings; perceptions and attention being lessened. It is claimed that the patient usually recovers in five or six months if he stops the use of tobacco during the first stage; in a year or so, if during the second stage. After the third stage the disease tends to pass into dementia.

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As the patient often becomes (especially through the use of the cigarette) an habitué ere puberty, proper development and balance of the sexual and intellectual system is checked. These patients break down men-

tally and physically between fourteen and twenty-five. The moral delinquencies other than sexual often show an especial tendency to forgery and deceit of parents. These are most often due to the insanity of puberty (hebephrenia), being precipitated by tobacco. The cigarette, if used moderately, may be a sedative, but as used it is a stimulant and is often made of spoiled tobacco resembling morphine in reaction, and on animals acting in a somewhat similar manner. As tobacco turns the salivary glands (which are concerned in the digestion of starch) into excretory glands it leads to imperfect digestion of starch, and to consequent irregular fermentation in the bowel, thus at once furnishing a culture medium from which microbes form more violent toxins and also create leucomains to interfere especially with a nervous system overstimulated by nicotine. This is one great reason why those who snuff and chew tobacco more frequently become insane from tobacco than smokers, albeit these last are not exempt.

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Statistics from the female employees of the Spanish, French, Cuban, and American tobacco factories, while defective and somewhat vitiated by the coexistence of other conditions producing degeneracy, support the opinion that the maternal tobacco habit, whether internal or the result of an atmosphere consequent on occupation, is the cause of frequent miscarriage, of high infantile mortality, of defective children, and of infantile convulsions. Tobacco in its influence on the paternal and maternal organisms hence so exhausts the nerve system so that an acquired neurosis results in such a way as to be transmissible.

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Laboriously the infant attains to his feet, laboriously through the years of childhood and of youth, in the playing-field and on the hillside, these feet acquire familiarity with the ground; but not till manhood do they take full possession. The secure foothold, the elastic step measure the degree of this possession, and they stand as the surest index of physical health; for in the balance, static and dynamic, of which they give proof, we see the evidence of well-trained muscles and nerves, of a stable and highly organized central nervous system, higher and lower, of a vigorous and sustained circulation, an efficient digestion, and, lastly, a well-ordered metabolism, without which all would fail.

One might select any lesser function, and say of its performance that all this, to the last detail, was required. This, indeed, would be true, since the health of the part implies the health of the whole, but physically no better illustration of the cooperation of all parts could be given than this of the well-balanced firm tread.

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In ancient times, to stumble was of evil omen, for the proudest achievement of man, the upright posture, was imperiled; and fear, when it took possession of the heart, expressed itself in a loosening of the knees—"and of the Greeks the knees were loosened with dismay."

Other psychic states show themselves not less clearly in gait and posture; for, while fear lags in its approaches and distrust halts, courage advances boldly with a clean step, and confidence awaits stout-heartedly.

Thus in health; but in sickness it is otherwise. Now no longer is the real man in evidence; for, however dauntless the courage, the firmest step must give way to the assaults of disease, the first effects of which are to take the child off his feet and to deprive the man of that spring and elasticity which till then had characterized all his movements.

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In a somewhat obscure passage Dante speaks of "the firm foot." The obscurity we may leave, the term we would hold, since it expresses in fewest words that of which we all are seekers, marking, as it does, the highest standard of physical health. Given health—given the firm foot—we may hope to go far. True, there are many things we cannot be—"*Roi ne puis, Duc ne suis, ni Comte aussi, mais Grand Seigneur de Coucy*"—but, if health be given and the heart be in the right place, each in his own way may be Grand Seigneur de Coucy. Life, however regarded, is, in all its spheres of activity, militant; if it is to be triumphant it demands a martial bearing.

This, then, is the goal, "the firm step." How shall it be compassed? By many ways, which we may not stop to consider, since it would take us away from that which we have in view—the order of treatment. Accordingly, that which now concerns us is the attitude in which disease, in each instance, should be faced; shall the patient stand, or sit, or lie? This is the first question which we must ask ourselves.

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As a general rule, it is good counsel that things be not taken "lying down"; of things

spiritual this is, perhaps, always true, but of things corporeal it does not hold. In sickness, more often than not, the storm passes safeliest over the prostrate figure. Each individual case, however, must be judged upon its merits, for there are forms of disorder in which the bed is to be shunned. Broadly, the test-question will be, Do we or do we not wish to economize the vital forces?

In the healthy adult the efforts requisite to maintain the erect posture are deep down below the surface of consciousness. As health declines, these efforts in their subjectivity tend to rise into recognition, and in the end this cognizance may become painful in its intensity. But, conscious or unconscious, the expenditure of force demanded will be unaffected; the forces which maintain the body upright have a fixed mechanical equivalent, and this equivalent it is of which we must ask, Can the body afford it? Here lies the only reliable criterion.

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Physiologists tell us that mere position, apart from the efforts required for its maintenance, has an influence upon the pulse-rate; this being quickest in the upright, least frequent in the recumbent posture. This pulse acceleration may be no true measure of effort for the whole body, but it may speak for the physics of the circulation alone—its mechanical advantage or disadvantage in the respective positions. Be this as it may, it is from the point of view of force expenditure alone that we can approach the subject, for, if position as such tells, it only will add an *a fortiori* value to the argument.

Every form of acute disease threatening exhaustion demands the bed for a longer or shorter period; nevertheless we must not forget that, apart from the economy involved, the recumbent posture is not an unmitigated blessing, but brings with it disadvantages, both general and local. Thus it means stagnation of the system generally as well as of the part, and both conditions may seriously endanger life. The sluggish metabolism of the entire body induced by confinement to bed obviously is detrimental, and to make clear the serious bearing of stagnation upon the local disorder we need only instance the risk of a hypostatic congestion of the lungs.

These contraindications, then, must be carefully weighed against the indications for rest, before a decision is arrived at. Fortunately, many times we are able to meet these disadvantages of posture by devices of one kind or another. Thus, of late years the development of massage and of the system of movements, active and passive, has allowed us much more safely to apply the general principal of rest, since by these means we can in a sense take exercise for the patient.

At whatever stage of the illness—at the onset, during the period of maximal stress, in the decline, and throughout convalescence—this question of posture and of movements as the means of apportioning the rest and exercise which we deem advisable will require primary consideration and a nice judgment.

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Next in the order of treatment must be weighed the question of the nurse in the two-fold aspect which she presents: in the first place, as an instrument of rest; as a means, that is, of applying this principle more completely by the skill with which she economizes the forces of the patient; in the next place, as the companion and expert, who by her presence conveys to the patient that sense of security the comfort and value of which it is at times difficult to overestimate. This second aspect is essentially psychic, but, inasmuch as repose of mind may be as essential to the recovery of the patient as repose of body, it is not less important.

From either point of view, the nurse ministers as the instrument of rest; and by the care which she bestows upon details she will give proof of her efficiency; and not by her cap and apron; for, as the cowl makes not the monk, so the uniform makes not the nurse.

The value of the nurse as a means of saving the bodily forces of the sick is obvious, but too often do we overlook her psychic value. We are not discussing here the question of the mental nurse as a specially trained attendant, but the nurse in her all-around fitness to wait upon disease.

The pathology of loss of confidence is obscure, but, it looms large in the sufferings of the patient, and it is frequently far more baffling to the physician than the more material manifestations of disease. Panic, loss of nerve are other names for the same phenomenon. In the hurly-burly of life, though health prevail, panic may prove a supreme moment, as history relates; in the sick-chamber it is not less vital. Unto such as suffer in this manner we must lend courage, as we would lend strength of muscles to the infirm body—to this end companionship.

These two aspects will not sum up all the points of view which the subject of the nurse presents, but they are, the most important!

(*To be continued*)

AMONG the BOOKS

TWO BOOKS BY W. J. ROBINSON

Sexual Problems of Today. By Wm. J. Robinson, M. D. New York: The Critic and Guide Company. 1912. Price $2.00.

Practical Eugenics: Four Means of Improving the Human Race. A lecture by Wm. J. Robinson, M. D. New York: The Critic and Guide Company. 1912. Price 50 cents.

That the American Society for Sanitary and Moral Prophylaxis was formed in response to an actual and very serious need, and that it, like many other societies with a similar program, is doing much good, can no longer be doubted, in spite of the shocked and prudish cry of "Shame" that is still heard, although muffled, here and there.

The present time is characterized, not only for its accomplishment, but even more for its insistence on delving into the causes of things that were not only unknown but supposed to be unknowable only a short time back. This insistence in wanting to know is so decided and so emphatic that expressions like those imputed to "The-Man-from-Missouri," who wants to know, and of the supposed Japanese correspondent of *The Daily News* who "asks for to know," have become popular if slang expressions.

This principal characteristic of the times has now extended to a field that had been covered by the veil partly of the mystic, partly of an entirely artificial disgrace, as though the Creator could produce anything shameful. From a worship, in olden times, of the generative organs, as typifying the life-giving power, the pendulum swung to the other extreme and made the sexual life and everything pertaining to it taboo. Even physicians who occupied themselves with irregularities or diseases of the sexual functions were until recently recruited almost entirely from the ranks of irregular practitioners, and to this very day in many foolish minds a certain odium attaches to reputable physicians who dare to devote themselves particularly and even exclusively to this field of medical endeavor. The genitourinary branch of medical science has found it difficult, indeed, to establish itself on a respected, we might almost say respectable, basis.

That the cloud that lay over this whole subject was artificial and foolish cannot be denied, and for a number of years an awakening, a gradual realizing of the error has been going on, and the movement for the socalled sex enlightenment has made rapid strides both here and abroad. It goes without saying that this movement goes into many by-paths and goes astray in many ways, because not only is the subject an extremely difficult one, but it is also very delicate, and those in its van must feel their way and must even determine the facts that have to be brought out. Nevertheless, through storm and stress the movement is passing toward a well-established and reasonable understanding of the problems involved, and the next generations will be the better for the struggles of today.

Among the foremost fighters for a reasonable and sane, indeed for a decent consideration and treatment of sex problems, stands Dr. Wm. J. Robinson, the editor of *The Critic and Guide* and of other medical journals, and the author of many important books. Dr. Robinson is an iconoclast who ruthlessly steps over foolish prejudices and mercilessly uncovers sham and untruth and lies; absolutely fearless in what he says, he voices his convictions in no uncertain terms and hammers away at the problem so that no one can say he has not heard.

Dr. Robinson's position on the problems herein mentioned was well defined in his "Never-Told Tales," a book that was reviewed in these pages some time ago, and also finds expression frequently enough in his many journal articles and editorials. Recently a more ambitious and extensive publication has appeared, in which the lessons conveyed in "Never-Told Tales" as well as the principles fought for by the author are developed more fully and elucidated more clearly.

The latest of his books "Sexual Problems of Today," is distinctly one of Dr. Robinson's own, his style, his forceful personality pervades every page and there can be no mistake about his meaning. Giving the lie to the old

saying that he who touches pitch becomes soiled, the author never is objectionable in his diction or in his assertions. Clean throughout; terribly in earnest; almost awful in the truths that he utters; forceful in his insistency upon his convictions, Dr. Robinson hammers his lesson home. Every physician is strongly urged to read and study this book, as well as the other volume by the same author on "Practical Eugenics," in which some phases of the same problem are discussed.

A NEW GERMAN REVIEW JOURNAL

Through the courtesy of the publisher, Julius Springer (Berlin), we have received the initial number of the *Zentralblatt für die Gesammte Innere Medizin und Ihre Grenzgebiete* (*Kongresszentralblatt*), which is to form the official organ of the German Congress for Internal Medicine, that convenes annually in Wiesbaden and before which the latest acquirements of medical research are reported and discussed.

In accordance with the immense field of investigation and observation with which the internist must be familiar, the departments of this new review journal will include general and experimental pathology, the infectious diseases, organic diseases, diseases of metabolism and of the nervous system, morphologic hematology, pharmacology, physical therapeutics, balneology, and, further, the "borderland" subjects between medicine on the one hand and surgery, gynecology, dermatology, ophthalmology, otiatrics, and pediatrics on the other hand.

The reviews contained in this first number indicate a broad familiarity with current literature and a sympathetic appreciation of the needs of the student, as of the practitioner who desires to keep abreast of the times. They promise valuable assistance to be rendered in future issues. The *Zentralblatt* is published by a committee of the German Congress for Internal Medicine, the price being 32 marks ($8.00) per volume.

KRAUSE: "SURGERY OF THE BRAIN AND SPINAL CORD"

Surgery of the Brain and Spinal Cord, Based on Personal Experiences. By Prof. Fedor Krause, M. D. English adaptation by Dr. Max Thorek. Volumes II and III. New York: The Rebman Company. 1912. Price, per volume, $7.00.

The second volume of this splendid work discusses the subjects of epilepsy and of neoplasms of the brain, the latter being continued in the third volume, which, further, takes up the subjects of intracranial suppuration, of metastatic processes, and of injuries to the brain, and then deals with surgical diseases of the spinal cord. The work is handsomely illustrated, has gained decidedly in value by not being a mere literal translation of the German original, but a free rendition and adaptation. Dr. Krause is too well known that his books should need special recommendation on our part. We merely will say that the English version is an excellent one.

Personally, we have come to await with pleasure the announcement of new publications of The Rebman Company, but embrace this occasion to urge physicians to write to this publishing firm for their latest medical catalog, issued a few weeks ago, which contains the titles and descriptions of many works of value to American practitioners. Mr. Rebman has set himself the aim to make the best that has been published in foreign medical literature available to American physicians; and in this he has succeeded admirably. The Rebman books are distinctive and beautiful in their mechanical makeup, and, owing to the exceeding care exercised in the selection of the English (or American) editors, the translations, which often present an exceedingly difficult problem, have been remarkably well done. We congratulate Mr. Rebman on the enviable place which his firm has obtained in the world of medical publishers.

ELLINGWOOD: "UNCOMPLICATED PREGNANCY AND LABOR"

Uncomplicated Pregnancy and Labor: Presenting a simple scientific method of treatment of the disorders of the pregnant term for their cure, and for the prevention of the complications of labor; to induce a normal balance of all functions, so that a labor without pain in very large part is the result. By Finley Ellingwood, M. D., Chicago. 1912. Published by the author. Price $1.60.

If pregnancy and child-bearing are normal physiological functions in every particular, as they certainly should be, no pathological complications whatever must be tolerated. It is an unjustifiable mistake for a physician at this day and age of the world to overlook the long train of apparent minor pathological conditions, passing them by with the statement that, because the woman is pregnant,

they must be endured. The physician must see to it that these obstructions are prevented, overcome, removed—and not say that they must be endured.

In the volume before us the author has laid out a course of observation and care on the part of the physician that will guide him materially in the highly essential education of the pregnant woman in these matters and in his care and treatment of her. In every chapter, whether he discusses motherhood, or the causes resulting in the disorders of pregnancy and in complications of the puerperium, or the hygienic rules, the diet, the management of labor, the therapeutic suggestions, the author has succeeded in imparting the knowledge that he has gained by years of experience and observation in such a manner that the little volume of only 160 pages contains an amount of information and guidance truly remarkable.

Dr. Ellingwood is to be congratulated on this little volume, and even more are physicians to be congratulated for having at hand, in a readily accessible form, that guidance of which often they are in need and by which they can the more easily benefit their patients.

STEDMAN: "MEDICAL DICTIONARY"

A Practical Medical Dictionary. By Thomas Lathrop Stedman, M. D. Second revised, edition. Illustrated. New York: Wm. Wood & Co. 1912. Price $4.50.

The reviewer has had occasion to express, in the October, 1911, number of CLINICAL MEDICINE, page 1121, his appreciation of Stedman's Dictionary, and a year of constant use only has served to confirm the favorable opinion then formed of this excellent reference book. While a few general criticisms in which the reviewer indulged at that time seemingly were overlooked in the preparation of the second edition, he is much pleased to be afforded opportunity to examine the book; and he now can only confirm the praise that was accorded this dictionary on its first appearance.

Owing to some literary work occupying the reviewer in the course of the past year, he became rather interested in veterinary terms, and was glad to find that Dr. Stedman had made the attempt to render his dictionary serviceable to veterinarians also. Unfortunately, this attempt has not gone very far, as evidenced by the single instance we will quote, to wit: We find that the terms rumen and abomasum, that is, the first and the fourth divisions of the stomach of ruminnentias, are defined; but, curiously, no mention is made of either of the other two divisions, the reticulum and the omasum. This, of course, is an oversight that without doubt will be corrected in a subsequent edition. Here and there differences of opinion arise, as a matter of course, but, as a whole, the reviewer considers Stedman's Medical Dictionary one of the best at the command of the doctor.

HART: "MIDWIFERY"

Guide to Midwifery. By David Berry Hart, M. D. With four illustrations in color and 268 diagrams. New York: The Rebman Company. 1912. Price $6.00.

For many years Edinburg was one of the Meccas to which medical students and graduates were wont to travel, from near and far, to obtain the best that was known about midwifery; and the name of that Scotch city is closely connected for all time with that of Sir James Y. Simpson, who not only was a great obstetrician, but through whom childbirth was robbed of many of its terrors, since it was he who, in 1847, introduced chloroform as an anesthetic in obstetrics.

The present volume is of interest because it presents the result of the investigations and experiences of Edinburg obstetricians; not, though, that it is at all provincial or limited, for it acknowledges good work done elsewhere.

BENNETT: "ELECTROTHERAPEUTIC GUIDE"

The Electrotherapeutic Guide, or, A Thousand Questions Asked and Answered. By Homer Clark Bennett, M. D. Ninth edition, revised and enlarged; containing 425 illustrations. Published by the author, Lima, Ohio. 1912. Price $3.00.

This "Guide" is a corollary to and part of the mail-course of thirty lessons issued by the National College of Electro-Therapeutics. It does not take the place of textbooks or a course of lessons on the subject, and is not intended as such; neither is it intended for the expert specialist. Rather is this "guide" meant to serve the general practitioner who has but a limited knowledge of the subject but wishes to avail himself in a modest way of this means of healing.

As indicated in the title, the subject-matter is arranged in the Socratic form of questions and answers. The text is lucid and clear,

and is rendered still more intelligible and available by many illustrations. Dr. Bennett's book is to be recommended for its eminently practical value and is sure to find favor with physicians who are using electricity in their practice.

DAWSON: "ORIFICIAL SURGERY"

Orificial Surgery: Its Philosophy, Application, and Technique. Compiled and edited by B. E. Dawson, M. D.; assisted by Elizabeth H. Muncie, M. D., A. B. Grant, M. D., and H. E. Beebe, M. D. Authorized by the American Association of Orificial Surgeons. Newark, N. J.: The Physicians' Drug News Company. 1912. Price $5.00.

This work represents the development of investigations and of surgical endeavor that have for a number of years been promulgated especially by Dr. E. H. Pratt of Chicago. Orificial surgery has made for itself a certain place as a branch of surgery and affords a fruitful field of specialized work. The present volume contains a large number of contributions by various surgeons upon the subject, among which we find such well-known names as H. E. Beebe, C. S. Eldridge, E. H. Pratt, P. S. Replogle, and others. It will prove a valuable reference work to the general practitioner.

MURPHY: "SURGICAL CLINICS"

The Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Published Bimonthly by The W. B. Saunders Company, Philadelphia. Price, yearly, $8.00.

The latest number of Dr. Murphy's "Clinics"—October, 1912. Vol. 1, No. 5—is introduced by some remarks on anesthesia made at the clinic, in which the author pays tribute to the sister-anesthetist in Mercy Hospital who has administered the anesthetics to his patients for many years. He contrasts the efficiency which naturally follows such a continued service with the plan followed in many large hospitals where the anesthetics are given all too frequently by inexperienced men, perhaps by the youngest interne. The rest of the number is taken up by a variety of operations, these being discussed in the usual happy manner established by these Clinics; they include such operations as the relief of nephrolithiasis, cholecystitis, gastroduodenal ulcer, chronic mastitis, etc.

ZINSSER: "DISEASES OF THE MOUTH"

Diseases of the Mouth. For Physicians, Dentists, and Medical and Dental Students. By Prof. Dr. F. Zinsser. Translated and edited by John Bethune Stein, M. D. With 52 colored and 21 black and white illustrations. New York: The Rebman Company. 1912. Price $7.00.

This volume deals entirely with the subject of syphilis and similar diseases as they affect the mouth. It is neither a general treatise on syphilis, nor is it a textbook, but rather a pictorial atlas of the syphilitic and kindred affections of the oral cavities, with particular reference to differential diagnosis; treatment being merely indicated.

The book is principally of value because of its fine illustrations in colors, which have been reproduced from specimens collected in the museum of the Hospital of Saint Louis in Paris. The text is concise and largely descriptive, which is not a detriment, considering the intention of the work, as well as the author's distinct assertion that it is not meant to be a textbook. The execution is elegant, after the manner to which we are accustomed in the Rebman books. We are particularly delighted with the wide margins, which permit the insertion of marginal notes and comments.

BLAIR: "MOUTH AND JAWS"

Surgery and Diseases of the Mouth and Jaws. A Practical Treatise on the Surgery and Diseases of the Mouth and Allied Structures. By Vilray Papin Blair, M. D. With 384 Illustrations. St. Louis: The C. V. Mosby Company. 1912. Price $5.00.

In the same degree in which dentistry is being recognized as a specialty of medicine, diseases of the mouth and jaws, both surgical and otherwise, are receiving more and more attention; which is very fortunate, because until comparatively recently the subject had received but scant attention. The author's treatise presents a very complete discussion of his subject and will surely find a ready reception, with physicians as well as with surgeons and dentists. One word in criticism may not be amiss; namely, in the discussion of the induction of anesthesia, we miss all reference to the use of hyoscine and morphine combined. This is unfortunate, inasmuch as this combination has proved of as great advantage in the hands of dental practitioners, as it has in the practice of surgery.

CONDENSED QUERIES ANSWERED

ANSWER TO QUERY

ANSWER TO QUERIES.—Referring to your answer to Query 5865, in the November issue of CLINICAL MEDICINE, I wish to say that the one who gives the advice about the removal of a wart on the eyelid by electrolysis is mistaken. A positive pole is not to be attached to the needle; it should be the negative, while the positive pole is placed in the patient's hand and attached to a wet-sponge electrode or wrist-band. Kindly correct that in your next issue.

Regarding Query 5860, I am sorry that the inquirer does not get any other advice but to give drugs. The application of heat, also the application of high frequency, by far excels any medicinal treatment of intercostal neuralgia and pleurodynia. The salicylates in moderate doses might be given, but only afford temporary relief in the majority of cases.

MAX J. WALTER.

Philadelphia, Pa.

QUERIES

QUERY 5873.—"Uterine Contractions and Cramps." J. L. A., Illinois, reports the case of a woman patient 25 years of age, who has given birth to four children and always enjoyed the best of health. Her first confinement was normal, but the last three were instrumental: normal pains were entirely absent. She suffered no pain with any of her children. Menstruation has always been irregular between births, but experienced no suffering during the period.

On February 15, 1912, this woman had a slight hemorrhage from the uterus, but examination revealed no dilation; also, she was suffering no pain and was able to do her usual housework. On the 16th she had another hemorrhage. Examination disclosed that one hand and foot of the fetus were protruding from the uterus; but they were replaced without difficulty and without causing pain. A later examination revealed a prolapsed funis with placenta prævia and profuse hemorrhage, but there were no pains. Severe cramping in the thighs was present. Hyoscine, morphine and cactin, and chloroform were given, and the child was delivered; the feet being brought down first, the head acting as a plug, preventing further hemorrhage.

The doctor concludes: "Would you or some of your readers kindly tell why this patient suffers no pain during labor; also, why she has those severe crampings in the thighs? What would be the correct treatment to produce natural pains and relieve the cramps?"

Really, it is impossible, because of a total lack of knowledge of the uterine and pelvic conditions here to express a positive opinion as to the cause of the absence of labor-pains in this woman.

The contractions of the uterus possess four distinct characteristics: they are intermittent, peristaltic, involuntary, and (ordinarily) painful. Just why contractions begin is a moot point. It is generally understood that the wave commences in the region of the tubes and passes downward toward the cervix; but, strangely enough, the "pain" during the "initial contractures" last from 60 to 90 seconds, while the peristaltic contraction persists but one-half that period. It is true that nervous influences must be reckoned with—fear, the presence of strangers, anger, and so on, may cause more frequent or more tardy contractions.

Nevertheless, as in all unstriped muscle-fibers, contractions are involuntary. Careful observation leads us to believe that the sensation of pain is experienced only during the height of contraction, which commences and ends painlessly. The earlier pains are far from being severe in the average female.

In fact, active contractions of the uterus are known to take place without causing the slightest distress, but later, as the time approaches for the expulsion of the fetus, the lower segment of the uterus is particularly acted upon and dilatation of the cervix commences. Now the patient experiences *pain*. Usually it is referred to the sacrum and sides of the uterus. If the parts are flaccid and the birth-canal is roomy, the pains are not apt to be so severe, and, if, as is generally supposed, most of the discomfort is due to the obliteration of the cervix and pressure upon the maternal parts by the oncoming head, we can readily understand that the woman whose parts are large and relaxed has practically no cervix to dilate, therefore pressure does not occur, and she escapes with very little suffering.

More or less distress is occasioned, unquestionably, by the compression of the uterine nerves, and especially is this the case during the third stage. It is just possible that uterine anesthesia obtains in certain cases and pressure, therefore would not produce pain. We all know that some women can practically deliver themselves without experiencing distress worth speaking of. The writer has for years pointed out that relaxation of the parts tends towards painless delivery. In more than one instance he has succeeded, by giving castor oil and having the abdomen and perineum thoroughly rubbed with olive oil, in rendering labor practically painless to women who in their prior accouchements suffered abominably.

Some abnormal condition exists in the woman under observation, and we suggest that you make a very careful physical examination. Especially look for anesthetic areas along the spine. Test the reflexes. Observe the position of the uterus and its size. Find out whether the woman feels ordinary pain as acutely as other people. It must be remembered, of course, that the muscles of the limbs undergo considerable strain during the expulsion of the fetus. Muscle pains may also be due to the presence in the blood of toxic substances. The urine and blood should be examined.

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QUERY 5874.—"Chronic Leg Ulcer." J. M. S., Kentucky, has under treatment a lady, 60 years old, who has been suffering with a "sore leg" for twelve months. The sore is located on the outside of the calf, about midway between ankle and knee, first appearing as a small blister. When she scratched it, it became worse, developing into a very ugly sore of about three by four inches in extent. Under treatment it has reduced to about one and one-half by two inches, and is looking a great deal better, but has remained stationary for three months.

This description seems to indicate a necrotic ulcer, and we are inclined to advise this line of treatment: Clean the sore thoroughly with hydrogen-dioxide solution, wash away the froth with boric-acid solution, then, with a small ear-spoon and scissors trim away any necrotic tissue disclosed. After drying, apply pure oil of turpentine with a camelshair brush, then dress with a good antiseptic oil on gauze, continuing until a healthy condition is established. Then begin with applications of defibrinated bovine blood, following this technic:

First very thoroughly cleanse the wound. Now cover the sore itself with a piece of rubber tissue plentifully perforated with small holes; over this place a pad of gauze saturated with the blood preparation selected, protecting this with rubber tissue; over all place a liberal quantity of sterile gauze and bandage lightly. The dressing should be changed twice daily, the lesion being first flooded with warm boric-acid solution. If there is any trouble in securing cicatrization, make a few pin-point grafts, placing minute particles of skin at short intervals over the surface of the lesion, then dress as above. If there are any varicosities, one can not do better than to use Unna's dressing. In fact, most of these old sores yield very promptly under such treatment.

A very satisfactory antiseptic elastic paste which is applied in connection with an especially woven bandage, is now marketed. The dressing is left on from four days to a week and then changed. Healing is usually secured within a month.

It will probably be advisable to give the arsenates and irisoid to this patient, together with, perhaps, nuclein, 8 or 10 drops morning, noon and night. Maintain elimination—renal, dermal and intestinal.

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QUERY 5875.—"The Business Side of Practice." J. M., Texas, regretfully canceling his subscription for CLINICAL MEDICINE, writes as follows: "I have been here two years and a half and have not made expenses, but I shall be obliged to remain for six or seven months longer. You may think I have no practice, but that is not it: I gave credit to everybody who asked for it. And that was the end of things. Worse still, I dispensed my own drugs (mostly the active

principles in granule and tablet form), and lost the cost of those also. I have scores of bills standing out, ranging from 8 to 225 dollars, but cannot collect a cent. Now I refuse to treat anyone until the fee is paid, with the result that I really have no practice at all."

This is an unfortunate situation, indeed; still, things may not be as bad as they look and yet work out satisfactorily. Really, a good doctor, who uses the active principles correctly, should be able to command a remunerative practice. That is what thousands of them throughout the country are doing, for the public in these days patronizes the man who accomplishes things. The physician who diagnoses closely, recognizes the pathological conditions in his patients, selects the *right* remedies, and prescribes them in small oft-repeated doses to effect *is bound* to secure good results and the goodwill of his community.

The great trouble is that the average doctor is not a business man. He does not keep his accounts closely, nor insists upon monthly settlements. The present writer has preached the necessity for such procedure for, lo! these many years, yet, he himself at the present time has outstanding accounts aggregating two or three thousand dollars; many of his patients having owed from twenty-five to one hundred dollars for more than a year. They are perfectly good for their debts, and, if pressed hard, would settle. Somehow a doctor dislikes to ask urgently for what is due him, notwithstanding the fact that everybody else invariably pushes him.

The sooner we all realize that there is a business side to the practice of medicine and we proceed along well-established business lines, the better it will be for us. There certainly would be less penniless widows and children to live as a reproach to the profession. If we are dependent upon our earnings and give real service for the money we demand, we should, like other paid workers, enforce periodical settlements. The landlord, butcher, baker, clothier, and all the rest insist upon being paid at least monthly, and the doctor has to pay their bills as surely as other people or go without the necessaries of life.

In order to secure the necessary funds, the doctor faces heat and cold; he wrestles with death at dawn, midnight, noon; he relieves suffering, dispels misery, bears the burdens of others. He is father confessor, adviser, consoler, and often supreme judge. In his hands rest the happiness and reputations of men and of women. He supports the young mother through the pangs and perils of childbirth and gives her offspring a fair start upon the road of life. He wards off disease whenever that is possible—thereby really injuring himself—and when illness does come he endeavors to restore health as quickly as possible; again in this way reducing his own potential income.

Working always faithfully for others and thinking never of self, it is perhaps not to be wondered at that the doctor is a "poor collector"; but no man living earns his money more honestly than he, and the wise ones will see that they get it.

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QUERY 587.6—"Dorsal Myelitis." J. M., Texas, writes: "A young lady, age 24, about 5 feet 9 inches high, weight 126 pounds, auburn hair, florid complexion, bright eyes, fairly well nourished, of sanguine, nervous temperament, one night about seven years ago was attacked in bed by a very severe pain in the sacrum, followed by hemiplegia and partial paraplegia. Under medical treatment the former has been cured, but the latter condition remains. For some time the catheter had to be used, and even now she has only slight control over bladder and bowels. The flexor muscles of the thighs are tense, contracted and hard, and the lower legs are at right angles to the thighs. There is very little or no atrophy of the muscles. She can move her toes, but can not straighten the limbs. Digestion always was fairly well but has improved decidedly under the use of nucleinated phosphates. For the bladder trouble apis was tried, but without any result. What line of treatment do you suggest?"

To the foregoing communication we replied, in substance, as follows:

Before undertaking further treatment, go over this woman from head to foot—test the reflexes; examine the urine; and see whether you can detect any intrapelvic or spinal lesion. What is the family history; is there tuberculous or syphilitic taint?

In dorsal myelitis, it need not be pointed out, hyperesthesia, hyperalgesia, and spontaneous muscle contractions in the paralyzed limbs are some of the phenomena. Slight pressure on certain points may produce intense formication, sometimes contractions. Total sensory paralysis indicates a pronounced destruction of the cord; hence, the extent of sensory disturbance is of greatest importance, in order that we may ascer-

tain the extent of the lesion. Further, anesthesia may extend from the tip of the toes to the clavicles; but in disease of the lowest dorsal-cord segment the anesthesia is limited to the legs, anteriorly reaching Poupart's ligaments, posteriorly, the lumbar vertebra. With each higher segment, the border of the anesthesia rises. In disease of the ninth and tenth dorsal segment, the anesthesia reaches the umbilicus.

It is only in the most marked cases of dorsal myelitis in which paralysis is complete and implicates all of the sensory and motor fibers. The legs no longer obey the impulse of the will, and only by dysethesia, pain, and involuntary contractions reveal evidences of life. The sphincters are insufficient. Sooner or later, unless great care is exercised, bedsores and obstinate cystitis occur.

We suggest that you look into the history carefully; if possible, refer to some of the textbooks on diseases of the nervous system and study the clinical picture of dorsal myelitis. A very excellent discussion of the subject will be found in Salinger's "Diseases of the Nervous System," of the Modern Clinical Medicine Series. However, much more definite data than above present are required for the formulation of intelligent suggestions.

In answer to the foregoing, we received the following communication, describing conditions more in detail:

"There is no tuberculosis or syphilitic taint; there is no albumin, sugar, indican or other abnormal product (excepting some epithelium from the bladder) in the urine. Sensation in the legs is fairly good—better in the left than in the right one, the latter sometimes tingling up to the hip—the right atrophied more than the left; the right 10 inches, the left 11 inches in circumference at the calf. About four years ago a doctor in Savannah, Ga., straightened the right leg forcibly by a mechanical appliance, causing great suffering; but upon removing the apparatus the leg returned to its former position, by short jerks, and has remained so ever since. No attempt was made to straighten the left limb. After this operation the right leg swelled up enormously down to the toes and had to be bandaged. The left did not swell. After the swelling subsided blisters formed on the heel and toes, resulting in ulcers; but these subsequently healed.

"There is tenderness over the lower lumbar vertebræ. She can flex her legs on the thighs, and the thighs on the abdomen, without pain or distress. She is tolerably sensitive to atmospheric changes, and at such times the legs jerk slightly, especially if any weight, such as a book, is placed on her lap. I think I misstated the condition of bladder and rectum in my former letter. She retains the urine for three or four hours, but when the desire to urinate comes on she has no control; the same with the rectum.

"The partial anesthesia is limited to the legs (anterior and posterior portions), not extending above Pouparts' ligament. There is no hyperesthesia or pruritus. Moderate pressure over the lower portion of the lumbar vertebræ does not cause contraction or any other painful sensation in the limbs. Nutrition is fairly good; she has improved considerably as to appetite and sleeps nicely since taking nucleinated phosphates."

After this additional information, we have no doubt that you have to do with a case of dorsal myelitis, the lower segments alone being involved; but must say, with regret, that really very little can be done for this condition. Blisters and other forms of counterirritation must be avoided, because of the danger of bed-sores. Epsom-salt sponge-baths at 85 or 90 degrees may be given daily; also the galvanic current, with the electrodes applied to the vertebral column (general spinal galvanism) often is of service. Cystitis should be met by irrigation of the bladder with a solution of boric acid and the internal administration of formin compound and arbutin. The bowels should be kept open by means of injections, every morning, of one or two pints of salt solution (1 dram to 1 pint). The nucleinated phosphates and neurolecithin (preferably both, in alternation) are indicated.

Massage is of benefit in improving circulation and preventing wasting of the muscles. Many physicians recommend the straightening of the contracted limbs by the use of mechanical appliances or tenotomy. In compression-myelitis, pressure must be removed by means of proper orthopedic appliances.

The prognosis naturally is more serious in a rapidly progressive paralysis, and comparatively favorable when signs of paralysis are incomplete, bladder and rectal symptoms absent, and no serious complications (bedsores, cystitis, etc.) show up. Only when regeneration begins is there hope of improvement; that is, when the paralytic phenomena disappear, abolished reflexes return, and flaccid paralysis assumes a spastic character. Muscular regeneration is shown by an improvement in electric reaction. In mild cases,

improvement does not take place for many weeks; in severe ones, not for months. Moreover (infrequently), a dormant inflammatory process may flare up again, destroying the effects of improvement and bringing about even more severe paralysis. When the symptoms of paralysis reach a definite stage of arrest, the patient may live for many years, but a cure can hardly be expected.

As we have pointed out, there is no really effective treatment, apart from specific treatment in syphilitic cases. Strychnine is of service, if the sphincters are involved, in anesthesia and in flaccid paralysis. By stimulation of the reflex-centers it increases the excitability of the motor nerves in the paralyzed muscles, and, in combination with electric and gymnastic measures, favors the restitution of normal conditions. Tonics, stomachics, laxatives, and so on, must be employed as conditions indicate.

We would strongly urge you to read the chapter on treatment in Salinger's "Diseases of the Nervous System"; special attention there is given to the physicomechanical treatment (massage, gymnastic exercises, electricity, hydrotherpay, and balneotherapy), treatment by apparatus and surgical procedures.

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QUERY 5877.—"Injection of Hemorrhoids and Hernia." A. A., New Jersey, wants to know where he can obtain knowledge regarding the injection-method of treating hemorrhoids and hernia, adding: "By this I mean practical work; some place where the work is done. I should like to attend such a place either as pupil or assistant. I have several textbooks on these subjects, but they do not meet my requirements."

It may be of some interest to more than one of our readers to have the present writer outline his own method of injecting hemorrhoids; for, really, it is not necessary for anyone to undertake a journey for the purpose of familiarizing himself with this simple procedure. For, indeed, it is simplicity itself, provided you are able to dilate a sphincter and differentiate between internal, marginal, and external hemorrhoids; and one should have no difficulty whatever in succeeding with the injection-method.

Follow the technic prescribed, absolutely. Never use a weak solution of carbolic acid. Always remember that success in a great measure depends upon making the injections into the hemorrhoidal tumors slowly, and to be sure to introduce a sufficient amount of the fluid to coagulate thoroughly the included blood. You may be sure of trouble if the needle-point enters the wall of the intestine; while, if the injection is not sufficient to cause thorough coagulation in the tumor, expect to have to deal with a painful and persistent slough. In all cases be sure to dilate the sphincter first.

Never inject an *external* hemorrhoid; it is much easier to anesthetize the skin with an ethyl-chloride spray, incise, turn out the blood clot, then finish with a stitch or two. Any *internal* hemorrhoid may be injected with safety. If the bowels are prevented from moving for forty-eight hours and then opened thoroughly, and the rectum is lubricated with a good antiseptic oil before and after stool, no trouble whatever should be experienced by the patient. Of course, a preliminary purge and cleansing colon flushing must not be neglected, as well as forbidding the subject to fill up with bulky food the last day. After operation, pertinent dietary rules hold good.

As to *hernia*, we cannot endorse the injection-method of treatment, although it is being practised by a number of physicians, and, in some instances, with success; still, failures must be expected. A physician always is liable to be sued for malpractice; and, quite naturally, a large percentage of recognized surgeons will be found to be opposed to the doctor who injects.

You might write to Dr. Depew, of Des Moines, Iowa, and ask him to give you data relative to his paraffin injection-method. Also, if you will communicate with Dr. Albright, author of "The General Practitioner as a Specialist" and editor of *The Office Practitioner*, Philadelphia, we are quite sure you will secure a fund of useful information. But we repeat, if you want to inject hemorrhoids, you cannot do better than to follow the method pursued successfully by this writer for many years, and as here outlined:

As the first step, ascertain whether the anal sphincter is constricted; if so, dilate thoroughly. Then proceed to expose the tumors; clean and anoint them with carbolized vaseline; halfway between apex and base insert the needle till the point is in the center of the tumor; inject *very slowly* 5 to 10 drops of a 50-percent solution of crystal carbolic acid in olive oil; turn the point of the needle to the right and inject 2 drops, then turn to the left and inject 2 drops more. If the pile is now white and hard, withdraw the needle. If blood follows the withdrawal, reinsert the needle and inject any unblanched portion, taking five minutes at least to complete the

injection. Treat the largest of several tumors first. Attend to three at one sitting without fear. After injecting, again anoint the piles and return them.

Have the bowels kept closed for three days and then open with a laxative saline or castor oil. However, before the patient goes to stool, 4 ounces of some bland oil followed by a quart of hot water (105 to 112 degrees) should be thrown into the bowel. Also, it is well to inject, after each movement, an ounce of oil to which 2 minims of carbolic acid has been added. Pain after operation but rarely calls for an opium and hyoscyamine suppository. Use the best material and a large injection-needle.

The use of a concentrated phenol solution, enough of it, and thorough distribution of the medicament throughout the hemorrhoid until the tumor turns white or gray in its entirety are the main points. Bear in mind that some hemorrhoids are pocketed and that, if the solution is thrown in from one side, no matter how much it is, it will fail to affect a portion of the tumor in another part. In a case of this type, remove the needle and reinsert it into the unblanched area, injecting drop by drop until this tissue also has turned white. Should blood follow the needle on its withdrawal, apply pressure with a wad of cotton for a minute; if the bleeding persists, you may rest assured you have not destroyed the circulation, and must make another injection.

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QUERY 5878.—"Remedy for Conjunctivitis". J. L. C., New York, wants a good remedy for conjunctivitis. There are no fixed generally applicable conjunctivitis formulas, but we do not believe you can improve very much upon the following excellent collyrium: Boric acid, 5 to 10 grains; sodium sulphocarbolate, 2 grains; glycerin, 10 drops; water, 1 ounce. (One dram of rose water may take the place of an equal quantity of the water.)

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QUERY 5879.—"Chelidonoid in Carcinoma." W. E. McC., New York, is treating a woman of sixty-four years afflicted with carcinoma of the breast, a hard lump having developed close to the nipple. She was first treated by the Alexander method, later with red clover and other alteratives. The growth enlarged, however, and electricity (copper anode) was employed recently. At the present time an ulcerated surface, three inches wide, extends from the nipple downward and four inches from the nipple toward the arm. The patient has had one or two convulsions, and she is in a very depressed condition; also she is losing the sense of touch in and control of her right hand. The present medication is with phytolaccoid and tonics, and the doctor asks what we think of the addition of chelidonoid.

Phytolaccoid when given where indicated and in dose enough is a remarkably useful drug, and with irisoid and arsenic iodide might be of service in this case, but naturally you cannot expect a cure.

Chelidonoid has not proven as efficacious as its advocates hoped. Indeed, no internal treatment can materially influence carcinoma of the breast. Prompt extirpation of the affected mamma three years ago would have been the correct procedure. By this time metastases undoubtedly exist. The utmost you can do for this patient is to prolong life and relieve pain. Orthoform and carbenzol ointment will meet the latter indication.

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QUERY 5880.—"Physiologic Anemia." S. B., Texas, has come across the expression of "using glonoin to physiologic anemia," and doubts whether he fully understands the meaning of the term.

There may be some misunderstanding about this; if, however, the phrase quoted has been used, then we, personally, can not approve of it. True, glonoin produces an almost instant and profound fall in vascular pressure, due to dilatation of the arterioles and veins of the surface of the body, and, hence, there is, temporarily, a comparatively bloodless condition of the deeper tissues; still, this condition can hardly be described as a "physiologic anemia." If the same amount of blood is still present in the individual, there merely occurs a disturbance of the circulatory status.

Dunglison's definition of anemia—namely, bloodlessness; deficiency of blood; opposite condition of plethora or hyperemia—may be accepted in this condition. The individual is not bloodless. We have not, by the action of glonoin, produced a deficiency of blood. Still, glonoin unquestionably does affect the circulation and brings a large proportion of the blood supply to the surface, and in this manner naturally produces a temporary deficiency of blood elsewhere in the body. We cannot correctly speak of such a condition as a physiologic anemia, though without due thought such an expression might naturally enough be used.